Idaho Children's Health Risks

Idaho Department of Health and Welfare,
Bureau of Health Policy and Vital Statistics

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EXECUTIVE SUMMARY

Idaho Children's Health Risks is a compilation of data on disparities in the health of children in Idaho. The report is divided into age groupings ranging from 0-17 years of age. This report does not present summary data for all age groups; instead, it identifies populations of children determined to be at risk.

For inclusion in the report, each indicator had to meet one or more of the following criteria:

- Not meeting Healthy People 2010 goal(s) for the specific indicator
- Significant disparities between Idaho and the U.S. for the specific indicator*
- Significant state level changes (negative) in the indicator over the past five years*
- Significant disparities between different populations in Idaho in regards to the specific indicator*

*Significance is determined at the 95% confidence level. See technical notes for more information on the methods used in determining statistical significance.

The following sections summarize the findings.

Infants Aged <1 Year:

Prenatal Care

Idaho's rate of first trimester prenatal care has increased significantly in the last five years, from 78.7 percent in 1998 to 82.1 percent in 2002. However, first trimester prenatal care rates are still lagging for many populations in Idaho, and the state has not achieved the Healthy People 2010 (HP2010) goal of 90.0 percent of women giving birth having initiated prenatal care in the first trimester of pregnancy. Women aged 24 and under, as well as women aged 40-44, were significantly less likely to initiate prenatal care in the first trimester than women of all ages. The rate of first trimester prenatal care was significantly lower for Black women, American Indian women, Hispanic women, unmarried women, Medicaid recipients, and women who selected self-pay on the birth certificate as the payment source for delivery. Women who used tobacco during pregnancy and women with a low or average educational attainment for their age also had significantly lower rates of first trimester prenatal care than all women.

Tobacco Use During Pregnancy

Even though the rate of tobacco use during pregnancy has decreased significantly in Idaho from 13.1 percent in 1998 to 10.5 percent in 2002, Idaho's rate is still much higher than the Healthy People 2010 goal of 1.0 percent (99.0 percent of mothers abstaining from tobacco use during pregnancy). Young mothers aged 15-24, American Indian women, unmarried women, and Medicaid recipients were significantly more likely than all women to use tobacco during their pregnancy. Health District 1 and Health District 2 had significantly higher rates of tobacco use during pregnancy than all of Idaho. Tobacco use during pregnancy ranged from a high of 31.1 percent in Shoshone County to a low of 2.7 percent in Madison County.

Preterm Births

While Idaho's preterm rates were significantly lower than U.S. rates from 1998-2002, the percent of Idaho babies born before 37 completed weeks of gestation has increased significantly from 9.1 percent in 1998 to 10.4 percent in 2002 and is higher than the Healthy People 2010 goal of 7.6 percent. Teen mothers aged 15-19, and mothers aged 35 or more years were significantly more likely to have a preterm baby than women of all ages. The rate of preterm births was significantly higher for American Indian women and Hispanic women. Unmarried women were significantly more likely to have a preterm baby than all women. Women who received no prenatal care, women who used tobacco during pregnancy, and women with a low educational attainment for their age were also significantly more likely to suffer preterm delivery than all women.

Low Birth Weight Births

Idaho's low birth weight rate (6.2 percent in 2002), while significantly lower than the U.S. rate for the same year (7.8 percent), is still higher than the Healthy People 2010 goal of 5.0 percent. Young mothers aged 15-19 and mothers aged 35 years or more had a significantly higher rate of low birth weight births than women of all ages. Medicaid recipients and unmarried women were also significantly more likely to have a baby weighing less than 2,500 grams. Women who used tobacco during pregnancy were significantly more likely to have a low birth weight baby than all women. The low birth weight rate was significantly higher for women with a low educational attainment for their age than for all women.

Out-of-Wedlock Births
Young mothers aged less than 25, Black, American Indian, and Hispanic women were all significantly more likely to have a baby out of wedlock than all women. The rate of out-of-wedlock births was significantly higher for women with a low or average educational attainment for their age, than for all women. Medicaid recipients and women who selected "self-pay" as the chief payment source on the birth certificate for delivery were significantly more likely to have a baby out of wedlock. The percent of out-of-wedlock live births ranged from a high of 34.3 percent in Shoshone County to a low of 7.0 percent in Madison County.

Breast-feeding
Idaho has met the HP2010 goal for breast-feeding at birth (Idaho = 89.2 percent, HP2010 goal = 75 percent), but not for 6 months (Idaho = 45.4 percent, HP2010 goal = 50 percent). There are disparities in the rates of ever breast-feeding by educational attainment for age, marital status, and household income. Mothers with a low educational attainment for their age (81.6 percent), un-wed mothers (80.1 percent), and mothers with a household income less than $15,000 per year (83.9 percent) were all significantly less likely to ever breast-feed than all mothers (89.2 percent).

Newborn Hearing Screening
Babies born to Hispanic mothers were significantly less likely to have their hearing screened at birth than all mothers (46.4 percent compared with 74.5 percent, respectively).

Immunizations
Approximately two-thirds (68.7 percent) of Idaho resident adult mothers reported that their baby was enrolled in Idaho's Immunization Reminder Information System (IRIS). Babies not enrolled in IRIS were significantly less likely to be fully immunized (49.8 percent) than all babies (81.2 percent). Mothers who never intended on getting pregnant were significantly less likely to report that their baby's immunizations were up-to-date (66.9 percent) than all mothers (81.2 percent).

Well-Baby Care
Hispanic mothers were significantly more likely to report that their baby had not been to any well-child visits than all mothers (13.9 percent of Hispanic mothers compared with 7.0 percent of all mothers).

Postpartum Depression
Mothers who were not married and mothers whose delivery was paid for by Medicaid were significantly more likely to report being at least a little depressed during the three months following delivery than all mothers (68.6 percent, 64.0 percent, and 61.0 percent respectively).

Infant Mortality
Idaho's infant mortality rate of 6.7 infant deaths per 1,000 live births in 2002 was higher than the Healthy People 2010 goal of 4.5 infant deaths per 1,000 live births. Idaho's mortality rate due to birth defects was significantly higher than U.S. mortality rates for the same cause. Hispanic women, unmarried women, and women aged 40-44 were all significantly more likely to have a baby die during the first year. The infant death rate was significantly higher for low birth weight babies and babies born to women with no prenatal care. Babies born in multiple births and preterm babies had a significantly higher risk of infant death than all babies. Women who used tobacco during pregnancy were significantly more likely to have a baby die during the first year and babies born to women with a low educational attainment for their age were significantly more likely to die before the age of 1 than all babies.

Sudden Infant Death Syndrome (SIDS) Mortality
The Sudden Infant Death Syndrome (SIDS) rate in Idaho (0.8 per 1,000 live births from 2000-2002) was higher than the Healthy People 2010 goal of 0.3 SIDS deaths per 1,000 live births. Women who used tobacco during pregnancy and women with an average educational attainment for their age had SIDS death rates higher than all women as a whole. Unwed mothers also had a SIDS death rate significantly higher than the state rate as a whole.

Birth Defects Mortality
The leading cause of infant death in Idaho is due to Congenital anomalies (birth defects). At 2.0 infant deaths due to congenital malformations per 1,000 live births, Idaho's birth defect mortality rate for 2000-2002 was higher than

the Healthy People 2010 goal of 1.1 per 1,000 live births. Babies born preterm and low birth weight babies had significantly higher rates of infant mortality due to birth defects than the total state rate.

Children Aged 1-4:

Immunizations
In 2003, 78.1 percent of Idaho children aged 19 to 35 months were up-to-date with their 4:3:1:3:3 series of vaccinations, lagging the U.S. rate of 79.4 percent and the HP 2010 goal of 80 percent.

Overweight
Among children aged 1-4 in 2003, American Indian (25.1 percent) and Hispanic (16.1 percent) children were significantly more likely to be overweight than all Idaho children (11.1 percent).

Child Mortality
Idaho's three-year death rate for children aged 1-4 (31.2 per 100,000) was lower than the U.S. death rate from 2000-2002 (32.3 per 100,000). However, Idaho's death rate was higher than the HP2010 goal of 18.6 per 100,000 population. From 2000-2002, drowning and submersion was the leading mechanism of unintentional injury deaths among 1-4 year olds, accounting for 34.4 percent of all unintentional injury deaths to children aged 1-4 in Idaho. Motor vehicle accident-related injuries (28.1 percent) were the second leading mechanism of unintentional injury deaths to 1-4 year olds.

Children Aged 5-9:

Oral Health
The percent of Idaho second and third graders who had experienced dental caries (64.1 and 65.9 percent respectively) was higher than the Healthy People 2010 goal of 42.0 percent, according to 2001 data. A total of 90.4 percent of Native American second graders had experienced dental caries. Second and third graders in Health District 3 had the highest rates of untreated dental caries in the state, with 42.7 percent of second graders (compared with 27.9 percent of second graders in the state) and 40.3 percent of third graders (compared with 27.3 percent of third graders in the state) having untreated caries experience in 2001. Hispanic second and third graders had higher rates of untreated dental caries than their non-Hispanic classmates and were well above the Healthy People 2010 goal of 21.0 percent. Throughout the state, second graders fell below the Healthy People goal of 50.0 percent of students having dental sealants. Hispanic second and third graders (25.2 percent and 36.2 percent, respectively) had lower rates of dental sealants than their non-Hispanic classmates (40.1 percent and 56.2 percent, respectively).

Child Mortality
Idaho's death rate for 5-9 year olds (17.3 per 100,000) was higher than the HP2010 goal of 12.3 per 100,000. Five to nine year olds had a significantly higher rate of unintentional injury deaths in Idaho than in the U.S. (10.0 per 100,000 in Idaho compared with 6.7 per 100,000 in the U.S.). Motor vehicle accident-related injury was the leading mechanism of unintentional injury deaths, accounting for 43.3 percent of all unintentional injury deaths to children aged 5-9 in Idaho.

Adolescents Aged 10-14:

Live Births to Adolescents
While the live birth rate to adolescents aged less than 15 was significantly lower in Idaho than in the U.S. from 1998-2002, the rate of live births to girls under 15 was higher for some populations, when compared with the entire state. Hispanic females aged less than 15 experience a significantly higher live birth rate than all females in the same age group (2.2 per 1,000 Hispanic females aged 10-14 compared with 0.4 per 1,000 total females aged 10-14). Health District 3 (0.9) and Health District 5 (0.8) also had a significantly higher rate of live births to girls aged less than 15 than the entire state (0.4). The percent of live births with Medicaid selected as the payment source for delivery was significantly higher for mothers aged less than 15 than for mothers of all ages (46.3 percent compared with 29.4 percent).

Adolescent Mortality
Ten to fourteen year olds had a significantly higher rate of death due to accidents in Idaho than in the U.S. (12.6 per 100,000 in Idaho compared with 7.5 per 100,000 in the U.S.). The rate of motor vehicle deaths to 10-14 year olds was significantly higher in Idaho than the U.S. from 2000-2002 (8.8 per 100,000 in Idaho compared with 4.7

per 100,000 in the U.S.). Motor vehicle accident-related injury was the leading mechanism of unintentional injury deaths in Idaho, accounting for 70.0 percent of unintentional injury deaths to adolescents aged 10-14. The leading mechanism for intentional injury deaths to 10-14 year olds was firearm-related injury, accounting for 44.4 percent of intentional injury deaths to 10-14 year olds from 2000 to 2002.

Teens Aged 15-17:

Live Births to Teens
Despite a significant decrease in Idaho's rate of live births to teens aged 15-17, the teen birth rate was significantly higher for some populations, when compared to the entire state. American Indian females aged 15-17 experience a significantly higher live birth rate than all females aged 15-17 (39.2 per 1,000 American Indian females aged 15-17 compared with 21.5 per 1,000 total females aged 15-17). The rate of live births to teens aged 15-17 was also significantly higher for Hispanics (67.2 per 1,000 Hispanic females aged 15-17). The percent of live births with Medicaid selected as the payment source for delivery was significantly higher for teen mothers aged 15-17 than for mothers of all ages (57.3 percent compared with 29.4 percent). Health District 3 (34.0 per 1,000 females aged 15-17) and Health District 5 (28.4) had significantly higher rates of live births to teens aged 15-17 than the state (21.5).

Tobacco Use
The Healthy People 2010 goal is to lower the percent of students who used chewing tobacco or snuff on one or more of the previous days to 1.0 percent. According to the Idaho Youth Risk Behavior Survey (YRBS), 5.7 percent of Idaho students indicated using chewing tobacco or snuff in 2003.

Sexual Behavior
The 2003 YRBS reported 36.4 percent of Idaho 9th to 12th graders ever having sexual intercourse, which is above the Healthy People 2010 goal of 25 percent ever having sexual intercourse (75 percent of teens aged 15-17 remaining abstinent). The Healthy People 2010 goal for HIV and AIDS education is 90.0 percent. In 2003, 83.8 percent of Idaho students indicated being taught about AIDS or HIV infection in school compared with the U.S. rate of 87.9 percent.

Unintentional and Intentional Injury
The 2003 YRBS reported 7.7 percent of 9th to 12th graders reported carrying a weapon on school property one or more times during the previous month in Idaho, a rate higher than the U.S. rate (6.1 percent) and the Healthy People 2010 goal of 4.9 percent. Idaho's suicide attempt rate for 9th to 12th graders (2.7 percent), while lower than the U.S. rate (2.9 percent), was higher than the Healthy People 2010 goal of 1.0 percent. The HP2010 goal and suicide attempt rates are based on suicide attempts in the past 12 months that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse.

Dietary / Health Behaviors
Even though the percent of overweight students in Idaho (7.4) was less than the U.S. (12.1 percent) in 2003, Idaho's rate in 2003 was slightly higher than the rate in 2001 (7.2 percent). A total of 29.5 percent of Idaho 9th to 12th graders attended physical education class daily, lagging behind the Healthy People 2010 goal of 50 percent.

Traffic Violations and Collisions
The Idaho Transportation Department reported teens aged 15-17 accounted for 3.5 percent of all licensed drivers in 2002, but accounted for 8.1 percent of drivers in all collisions and 7.9 percent of drivers in fatal and injury collisions. Drivers aged 16-19 had violation rates well above the mean in areas shown to be major contributing factors to collisions, i.e., speeding, driving too fast for conditions, inattention, following too close, and disregarding stop signs and signals.

Crimes Against Persons
According to the Idaho State Police, females aged 15-17 were significantly more likely than males aged 15-17 to be the victim of crimes against persons (40.9 per 1,000 females aged 15-17 compared with 24.6 per 1,000 males aged 15-17) in 2003.

Teen Mortality
The unintentional injury death rate to 15-17 year olds was significantly higher in Idaho than the U.S. (37.6 per 100,000 in Idaho compared with 26.8 per 100,000 in the U.S.). From 2000-2002, motor vehicle accidents were the leading mechanism for unintentional injury deaths in to 15-17 year olds in Idaho, accounting for 81.1 percent

of unintentional injury deaths. The rate of motor vehicle accident deaths to teens aged 15-17 was significantly higher in Idaho than the U.S. (30.5 per 100,000 in Idaho compared with 21.2 per 100,000 in the U.S.). The rate of teen deaths due to suicide was significantly higher in Idaho than in the U.S. (12.2 per 100,000 in Idaho compared with 6.2 per 100,000 in the U.S.). Firearm-related injury accounted for 70.4 percent of all intentional injury deaths to 15-17 year olds and was the leading mechanism of intentional injury deaths in that age group from 2000-2002.

These findings are highlights of more detailed information and statistics which can be found in the main sections of this report. Please refer to the Introduction and Purpose (next page) for additional information about the report. We hope you find *Idaho Children's Health Risks* informative and useful.

INTRODUCTION

Idaho Children's Health Risks is a compilation of information and data from multiple sources on disparities in the health and well-being of children in Idaho. The report is designed to spotlight areas of concern and is not intended to be a comprehensive picture of children's health in Idaho. The report is divided into the following five sections or age groupings: infants less than one year of age, children aged 1-4 years, children aged 5-9 years, adolescents aged 10-14 years, and teens aged 15-17 years.

For inclusion in the report, each indicator had to meet one or more of the following criteria:

- Not meeting Healthy People 2010 goal(s) for the specific indicator
- Significant disparities between Idaho and the U.S. for the specific indicator*
- Significant state level changes (negative) in the indicator over the past five years*
- Significant disparities between different populations in Idaho in regards to the specific indicator*

*Significance is determined at the 95% confidence level. See technical notes for more information on the methods used in determining statistical significance.

Healthy People 2010 is a set of health objectives for the nation to achieve over the first decade of the new century. It can be used by States, communities, professional organizations, and others to help them develop programs to improve health. Healthy People 2010 objectives were developed by a team of experts coordinated by the Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services.

Healthy People 2010 is designed to achieve two overarching goals:

- Increase quality and years of healthy life.
- Eliminate health disparities.

These two goals are supported by specific objectives in 28 focus areas. Each objective includes baseline data and a target to be achieved by the year 2010. Healthy People 2010 objectives may be found at http://www.healthypeople.gov.

Many child health indicators were examined and not included in this report because they did not meet one or more of the criteria listed above. Some examples include child safety seat and seat belt use, teenage drinking and driving, and bike helmet use. For a complete list of indicators that did not meet the criterion for inclusion in this report, see Appendix A.

Data sources include Idaho Vital Statistics (birth and death certificate data), Idaho Behavioral Risk Factor Surveillance System (BRFSS), Idaho Pregnancy Risk Assessment and Tracking Survey (PRATS), Idaho WIC Program, Idaho State Smile Survey, Idaho Youth Risk Behavior Survey (YRBS), Idaho's Children and Family Services, and Idaho Transportation Department, Office of Highway Safety.

PURPOSE

This report was created to help direct the efforts of programs that support maternal and child health programs in Idaho. To identify populations of concern, each indicator was crossed with many demographic characteristics, such as sex, race, age, and county of residence, as well as several behavioral characteristics, such as prenatal care use and smoking during pregnancy. In the effort to provide program managers with actionable data that will help them in the allocation of their resources, only the data that met one or more of the criteria listed above were included in the report.

HISTORY

In 1998, the Idaho Child Mortality Review Team (CMRT) was formed to review deaths among Idaho children under the age of 18. The team was appointed by the Director of the Department of Health and Welfare and was comprised of representatives from public, criminal justice, health, and social service organizations. The team developed the following objectives to direct its work:

- Identify potentially preventable causes of death.
- Identify the risk factors leading to the death.
- Collect and organize the information into meaningful summaries of causes of child death in Idaho.
- Make specific and feasible recommendations to the Governor and chairs of the Senate and House Health and Welfare committees on ways in which child mortality can be reduced in Idaho.

The team screened all Idaho resident deaths that occurred in Idaho to children under the age of 18, but selected to further review a death if the death was due to an external cause, was unexplained, or was due to a cause with modifiable risk factors. Once the team selected a death for comprehensive review, the team used autopsy reports, coroner reports, law enforcement reports, medical records, emergency medical system records, and child protection records in their review. The team presented their summary of findings in Child Mortality Review Team Reports for child deaths occurring in 1997, 1998, 1999, and 2000.

These reports are located at:
http://www.idahochild.org/child_mortality_1997.pdf
http://www.idahochild.org/child_mortality_1998.pdf
http://www.idahochild.org/child_mortality_1999.pdf
http://www.idahochild.org/child_mortality_2000.pdf

This report was developed to further provide information on Idaho child mortality. While the Child Mortality Review Team summaries provided in-depth information and recommendations by cause of death, this report focuses on issues pertaining to children by age groups (<1, 1-4, 5-9, 10-14, and 15-17).

INFANTS AGED <1

IDAHO RESIDENT POPULATION

Infants Aged <1 Year

2002

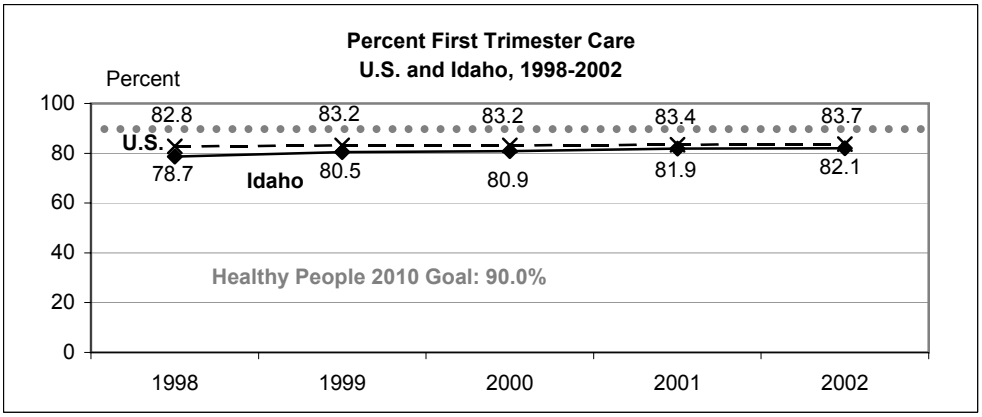
Residence	Total	Sex		Race				Hispanic Ethnicity
		Male	Female	White	Black	American Indian	Asian/Pacific Islander	
Idaho	20,226	10,338	9,888	19,499	191	296	240	2,618
District 1	2,392	1,215	1,177	2,312	9	52	19	107
District 2	1,163	587	576	1,069	10	60	24	18
District 3	3,122	1,559	1,563	3,054	20	23	25	821
District 4	5,488	2,798	2,690	5,227	116	17	128	389
District 5	2,630	1,319	1,311	2,579	9	29	13	685
District 6	2,756	1,453	1,303	2,627	15	99	15	277
District 7	2,675	1,407	1,268	2,631	12	16	16	321
Ada	4,839	2,491	2,348	4,635	71	17	116	287
Adams	28	15	13	28	-	-	-	-
Bannock	1,386	718	668	1,314	9	50	13	57
Bear Lake	112	62	50	107	3	2	-	2
Benewah	86	50	36	73	-	13	-	4
Bingham	771	392	379	729	-	42	-	169
Blaine	275	131	144	267	-	4	4	58
Boise	72	36	36	72	-	-	-	8
Bonner	415	210	205	402	1	8	4	13
Bonneville	1,410	737	673	1,379	12	9	10	147
Boundary	137	65	72	127	-	10	-	4
Butte	35	25	10	35	-	-	-	-
Camas	12	3	9	12	-	-	-	-
Canyon	2,453	1,189	1,264	2,398	19	17	19	665
Caribou	111	54	57	111	-	-	-	2
Cassia	473	250	223	467	-	5	1	161
Clark	27	18	9	27	-	-	-	18
Clearwater	65	33	32	63	-	1	1	-
Custer	34	22	12	33	-	1	-	4
Elmore	510	244	266	458	40	-	12	86
Franklin	194	122	72	190	3	1	-	11
Fremont	179	109	70	177	-	-	2	34
Gem	168	85	83	163	-	5	-	22
Gooding	199	94	105	197	2	-	-	60
Idaho	138	75	63	136	-	2	-	2
Jefferson	355	176	179	352	-	3	-	49
Jerome	349	170	179	342	-	7	-	96
Kootenai	1,561	790	771	1,519	8	19	15	78
Latah	460	222	238	441	1	5	13	12
Lemhi	66	27	39	66	-	-	-	3
Lewis	52	21	31	45	4	3	-	-
Lincoln	59	28	31	59	-	-	-	7
Madison	465	236	229	458	-	3	4	37
Minidoka	332	161	171	325	-	7	-	141
Nez Perce	448	236	212	384	5	49	10	4
Oneida	58	30	28	58	-	-	-	6
Owyhee	128	68	60	126	-	1	1	53
Payette	210	126	84	204	1	-	5	48
Power	89	50	39	83	-	4	2	30
Shoshone	193	100	93	191	-	2	-	8
Teton	139	82	57	139	-	-	-	29
Twin Falls	931	482	449	910	7	6	8	162
Valley	67	27	40	62	5	-	-	8
Washington	135	76	59	135	-	-	-	33

July 1, 2002 bridge-race population estimates, U.S. Census Bureau and National Center for Health Statistics, Internet release August 8, 2003.

FIRST TRIMESTER PRENATAL CARE

Idaho Resident Live Births

1998-2002



► While Idaho's rate of first trimester prenatal care has increased significantly from 78.7 percent in 1998 to 82.1 percent in 2002, disparities exist in the rate of first trimester care by age, race, ethnicity, educational attainment, and payment source.

Age of Mother					
Age of Mother	Total Live Births	First Trimester Care	Prenatal Care Unknown	Percent First Trimester Care[1]	Significantly Lower than the Total[2]
Total	101,184	79,130	3,278	80.8	
<15	112	44	1	39.6	Yes
15-17	3,433	1,924	129	58.2	Yes
18-19	8,038	5,341	309	69.1	Yes
20-24	31,979	24,285	1,143	78.8	Yes
25-29	29,121	24,073	838	85.1	
30-34	18,856	15,753	564	86.1	
35-39	7,851	6,353	229	83.4	
40-44	1,683	1,282	57	78.8	Yes
45+	100	69	4	71.9	
Not stated	11	6	4	N/A	N/A

► Women aged 15 and under were significantly less likely to receive prenatal care in the first trimester (39.6 percent) than women of all ages (80.8 percent).

Race of Mother					
Race of Mother	Total Live Births	First Trimester Care	Prenatal Care Unknown	Percent First Trimester Care[1]	Significantly Lower than the Total[2]
Total	101,184	79,130	3,278	80.8	
White	96,786	76,136	3,025	81.2	
Black	412	303	14	76.1	Yes
American Indian	1,616	1,026	75	66.6	Yes
Asian/Pacific Islander	1,419	1,085	68	80.3	
Other race	25	15	1	N/A	N/A
Not stated	926	565	95	N/A	N/A

► The rate of first trimester prenatal care was significantly lower for Black (76.1 percent) and American Indian women (66.6 percent) than for women of all races (80.8 percent).

Ethnicity of Mother					
Ethnicity of Mother	Total Live Births	First Trimester Care	Prenatal Care Unknown	Percent First Trimester Care[1]	Significantly Lower than the Total[2]
Total	101,184	79,130	3,278	80.8	
Non-Hispanic	87,075	70,058	2,580	82.9	
Hispanic	12,916	8,246	537	66.6	Yes
Not stated	1,193	826	161	N/A	N/A

► Hispanic women (66.6 percent) were significantly less likely to receive first trimester prenatal care than all women (80.8 percent).

1. Percents are based on records with known prenatal care.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.

FIRST TRIMESTER PRENATAL CARE

Idaho Resident Live Births

1998-2002

Mother's Educational Attainment for Age					
Mother's Educational Attainment for Age	Total Live Births	First Trimester Care	Prenatal Care Unknown	Percent First Trimester Care[1]	Significantly Lower than the Total[2]
Total	101,184	79,130	3,278	80.8	
Low	14,110	8,908	612	66.0	Yes
Average	34,713	26,039	1,191	77.7	Yes
High	48,448	41,569	1,241	88.1	
Not Stated	3,913	2,614	234	N/A	N/A

► Women with a low (66.0 percent) to average (77.7 percent) educational attainment for their age were significantly less likely than all women (80.8 percent) to obtain prenatal care during their first trimester.

Marital Status of Mother					
Marital Status	Total Live Births	First Trimester Care	Prenatal Care Unknown	Percent First Trimester Care[1]	Significantly Lower than the Total[2]
Total	101,184	79,130	3,278	80.8	
Not Married	22,117	14,119	955	66.7	Yes
Married	79,067	65,011	2,323	84.7	

► Unmarried women were significantly less likely to obtain prenatal care during the first trimester.

Tobacco Use					
Tobacco Use	Total Live Births	First Trimester Care	Prenatal Care Unknown	Percent First Trimester Care[1]	Significantly Lower than the Total[2]
Total	101,184	79,130	3,278	80.8	
No	88,822	71,054	2,735	82.5	
Yes	11,830	7,805	430	68.5	Yes
Unknown	532	271	113	N/A	N/A

► First trimester prenatal care rates were significantly lower for women who used tobacco during pregnancy.

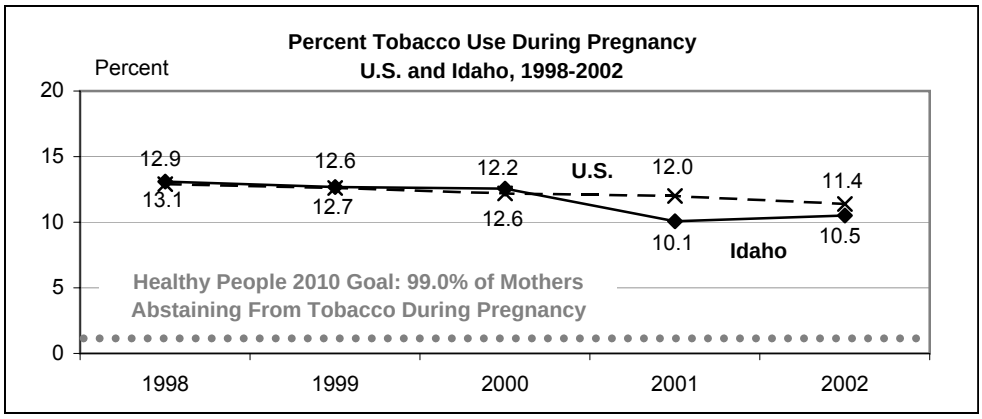
Payment Source for Delivery[3]					
Payment Source[3]	Total Live Births	First Trimester Care	Prenatal Care Unknown	Percent First Trimester Care[1]	Significantly Lower than the Total[2]
Total	101,184	79,130	3,278	80.8	
None	353	135	25	41.2	Yes
Self Pay	11,013	6,712	407	63.3	Yes
HMO	1,451	1,267	20	88.5	
Other Health Ins.	53,226	46,277	1,492	89.5	
Medicaid	28,280	19,350	1,064	71.1	Yes
Other Governmental	1,814	1,509	27	84.4	
Unknown	5,047	3,880	243	N/A	N/A

► Medicaid recipients (71.1 percent) and women with no medical coverage for delivery (63.3 percent) were significantly less likely to receive first trimester prenatal care.

1. Percents are based on records with known prenatal care.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
3. Payment source for delivery may change after the birth certificate is filed with the State of Idaho. Medicaid status data from the birth certificate may not match Medicaid data.

TOBACCO USE DURING PREGNANCY

Idaho Resident Live Births
1998-2002



► Even though the rate of tobacco use during pregnancy has decreased significantly in Idaho from 13.1 percent in 1998 to 10.5 percent in 2002, Idaho's rate is still much higher than the Healthy People 2010 goal of 1.0 percent (99.0 percent of mothers abstaining from tobacco use during pregnancy).

Age of Mother	Total Live Births	Used Tobacco	Tobacco Use Unknown	Percent Tobacco Use[1]	Significantly Higher than the Total[2]
Total	101,184	11,830	532	11.8	
<15	112	9	-	8.0	
15-17	3,433	655	23	19.2	Yes
18-19	8,038	1,757	50	22.0	Yes
20-24	31,979	4,823	173	15.2	Yes
25-29	29,121	2,455	132	8.5	
30-34	18,856	1,308	98	7.0	
35-39	7,851	666	36	8.5	
40-44	1,683	146	16	8.8	
45+	100	11	-	11.0	
Not stated	11	-	4	N/A	N/A

► Young mothers, aged 15-24 were significantly more likely to use tobacco during pregnancy than women of all ages.

Race of Mother	Total Live Births	Used Tobacco	Tobacco Use Unknown	Percent Tobacco Use[1]	Significantly Higher than the Total[2]
Total	101,184	11,830	532	11.8	
White	96,786	11,264	449	11.7	
Black	412	43	2	10.5	
American Indian	1,616	289	21	18.1	Yes
Asian/Pacific Islander	1,419	85	5	6.0	
Other race	25	-	-	N/A	N/A
Not stated	926	149	55	N/A	N/A

► American Indian women (18.1 percent) were 53.4 percent more likely to use tobacco during pregnancy than women of all races (11.8 percent).

Marital Status of Mother	Total Live Births	Used Tobacco	Tobacco Use Unknown	Percent Tobacco Use[1]	Significantly Higher than the Total[2]
Total	101,184	11,830	532	11.8	
Not Married	22,117	6,012	169	27.4	Yes
Married	79,067	5,818	363	7.4	

► Over one quarter of unmarried women giving birth from 1998-2002 used tobacco during pregnancy (27.4 percent).

1. Percents are based on records with known tobacco use.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.

TOBACCO USE DURING PREGNANCY

Idaho Resident Live Births

1998-2002

Mother's Educational Attainment for Age					
Mother's Educational Attainment for Age	Total Live Births	Used Tobacco	Tobacco Use Unknown	Percent Tobacco Use[1]	Significantly Higher than the Total[2]
Total	101,184	11,830	532	11.8	
Low	14,110	3,546	97	25.3	Yes
Average	34,713	5,537	172	16.0	Yes
High	48,448	2,150	140	4.5	
Not Stated	3,913	597	123	N/A	N/A

► Women with a low educational attainment for their age (25.3 percent) were more than twice as likely as all women (11.8 percent) to use tobacco during pregnancy.

Payment Source for Delivery[3]					
Payment Source[3]	Total Live Births	Used Tobacco	Tobacco Use Unknown	Percent Tobacco Use[1]	Significantly Higher than the Total[2]
Total	101,184	11,830	532	11.8	
None	353	12	7	3.5	
Self Pay	11,013	1,207	73	11.0	
HMO	1,451	121	11	8.4	
Other Health Ins.	53,226	2,808	170	5.3	
Medicaid	28,280	6,928	187	24.7	Yes
Other Governmental	1,814	153	9	8.5	
Unknown	5,047	601	75	N/A	N/A

► Medicaid recipients (24.7 percent) were significantly more likely than all women (11.8 percent) to use tobacco during pregnancy.

1. Percents are based on records with known tobacco use.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
3. Payment source for delivery may change after the birth certificate is filed with the State of Idaho. Medicaid status data from the birth certificate may not match Medicaid data.

TOBACCO USE DURING PREGNANCY

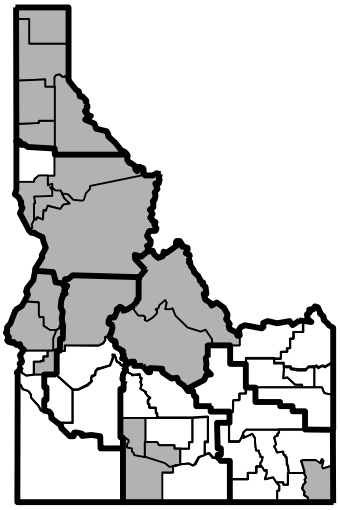
Idaho Resident Live Births

1998-2002

Mother's Resident County					
Residence	Total Live Births	Used Tobacco	Tobacco Use Unknown	Percent Tobacco Use[1]	Significantly Higher than the State[2]
IDAHO	101,184	11,830	532	11.8	
District 1	11,240	2,248	54	20.1	Yes
Benewah	572	132	4	23.2	Yes
Bonner	1,891	402	11	21.4	Yes
Boundary	637	122	4	19.3	Yes
Kootenai	7,413	1,367	32	18.5	Yes
Shoshone	727	225	3	31.1	Yes
District 2	5,750	832	17	14.5	Yes
Clearwater	381	85	2	22.4	Yes
Idaho	771	120	3	15.6	Yes
Latah	2,131	152	10	7.2	
Lewis	202	35	-	17.3	Yes
Nez Perce	2,265	440	2	19.4	Yes
District 3	17,033	1,918	134	11.3	
Adams	122	22	1	18.2	Yes
Canyon	12,809	1,403	98	11.0	
Gem	985	144	7	14.7	Yes
Owyhee	899	89	7	10.0	
Payette	1,522	158	16	10.5	
Washington	696	102	5	14.8	Yes
District 4	27,078	2,411	97	8.9	
Ada	23,843	2,028	87	8.5	
Boise	344	48	1	14.0	
Elmore	2,559	278	9	10.9	
Valley	332	57	-	17.2	Yes
District 5	12,853	1,701	48	13.3	Yes
Blaine	1,241	68	2	5.5	
Camas	51	2	-	3.9	
Cassia	1,928	197	7	10.3	
Gooding	1,118	181	5	16.3	Yes
Jerome	1,625	248	8	15.3	Yes
Lincoln	326	41	-	12.6	
Minidoka	1,762	181	10	10.3	
Twin Falls	4,802	783	16	16.4	Yes
District 6	13,604	1,423	123	10.6	
Bannock	6,863	711	94	10.5	
Bear Lake	420	66	5	15.9	Yes
Bingham	3,710	395	18	10.7	
Butte	186	23	-	12.4	
Caribou	520	68	2	13.1	
Franklin	1,070	74	-	6.9	
Oneida	288	36	-	12.5	
Power	547	50	4	9.2	
District 7	13,626	1,297	59	9.6	
Bonneville	7,164	860	33	12.1	
Clark	87	4	-	4.6	
Custer	183	32	-	17.5	Yes
Fremont	1,005	92	2	9.2	
Jefferson	1,748	126	9	7.2	
Lemhi	343	79	5	23.4	Yes
Madison	2,493	68	4	2.7	
Teton	603	36	6	6.0	

► The rate of tobacco use during pregnancy ranged from a high of 31.1 percent in Shoshone County, to a low of 2.7 percent in Madison County.

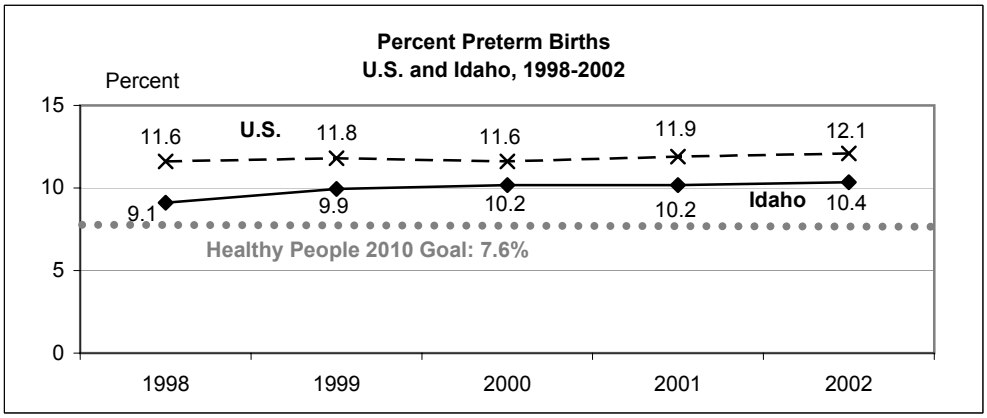
► The rate of tobacco use during pregnancy was significantly higher in District 1 (20.1 percent), District 2 (14.5 percent), and District 5 (13.3 percent than the entire state (11.8 percent).



1. Percents are based on records with known tobacco use.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.

PRETERM BIRTHS[1]

Idaho Resident Live Births
1998-2002



► The percent of babies born before 37 complete weeks of gestation has increased significantly in Idaho, from 9.1 percent in 1998 to 10.4 percent in 2002.

Age of Mother					
Age of Mother	Total Live Births	Preterm	Gestation Unknown	Percent Preterm[2]	Significantly Higher than the Total[3]
Total	101,184	10,014	643	10.0	
<15	112	18	-	16.1	Yes
15-17	3,433	410	41	12.1	Yes
18-19	8,038	873	57	10.9	Yes
20-24	31,979	3,059	200	9.6	
25-29	29,121	2,632	150	9.1	
30-34	18,856	1,841	118	9.8	
35-39	7,851	905	58	11.6	Yes
40-44	1,683	250	15	15.0	Yes
45+	100	26	-	26.0	Yes
Not stated	11	-	4	N/A	N/A

► Women aged 35 years or more were at 1.3 times the risk of having a preterm delivery than women under the age of 35.[4]

Race of Mother					
Race of Mother	Total Live Births	Preterm	Gestation Unknown	Percent Preterm[2]	Significantly Higher than the Total[3]
Total	101,184	10,014	643	10.0	
White	96,786	9,527	575	9.9	
Black	412	53	1	12.9	
American Indian	1,616	197	36	12.5	Yes
Asian/Pacific Islander	1,419	140	5	9.9	
Not stated	926	94	26	N/A	N/A

► American Indian women had a rate significantly higher than the rate for all women.

Ethnicity of Mother					
Ethnicity of Mother	Total Live Births	Preterm	Gestation Unknown	Percent Preterm[2]	Significantly Higher than the Total[3]
Total	101,184	10,014	643	10.0	
Hispanic	12,916	1,435	90	11.2	Yes
Non-Hispanic	87,075	8,451	528	9.8	
Not stated	1,193	128	25	N/A	N/A

► The rate of preterm birth was significantly higher for Hispanic women than for all women.

1. Preterm birth: Live birth born before 37 completed weeks of gestation.
2. Percents are based on records with known length of gestation.
3. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
4. See Technical Notes for information and methodology on relative risk.

PRETERM BIRTHS[1]

Idaho Resident Live Births

1998-2002

Marital Status					
Marital Status	Total Live Births	Preterm	Gestation Unknown	Percent Preterm[2]	Significantly Higher than the Total[3]
Total	101,184	10,014	643	10.0	
Not Married	22,117	2,583	201	11.8	Yes
Married	79,067	7,431	442	9.5	

► Preterm births were significantly more likely among unwed mothers.

Month Prenatal Care Began					
Month Prenatal Care Began	Total Live Births	Preterm	Gestation Unknown	Percent Preterm[2]	Significantly Higher than the Total[3]
Total	101,184	10,014	643	10.0	
First	79,130	7,633	244	9.7	
Second	15,000	1,469	28	9.8	
Third	2,903	265	11	9.2	
No Prenatal Care	873	157	70	19.6	Yes
Not Stated	3,278	490	280	N/A	N/A

► Women who received no prenatal care were at 2.0 times the risk of delivering preterm than women who obtained prenatal care at some point during their pregnancy.[4]

Mother's Educational Attainment					
Mother's Educational Attainment for Age	Total Live Births	Preterm	Gestation Unknown	Percent Preterm[2]	Significantly Higher than the Total[3]
Total	101,184	10,014	643	10.0	
Low	14,110	1,649	107	11.8	Yes
Average	34,713	3,483	148	10.1	
High	48,448	4,425	127	9.2	
Not Stated	3,913	457	261	N/A	N/A

► Women with a low educational attainment for their age were significantly more likely to have a preterm baby than all women.

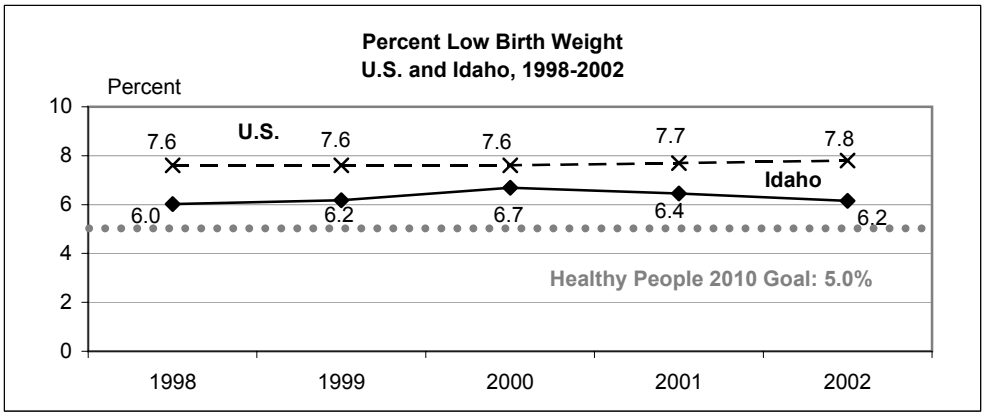
Tobacco Use					
Tobacco Use	Total Live Births	Preterm	Gestation Unknown	Percent Preterm[2]	Significantly Higher than the Total[3]
Total	101,184	10,014	642	10.0	
Yes	11,830	1,390	94	11.8	Yes
No	88,822	8,532	486	9.7	
Not Stated	532	92	62	N/A	N/A

► Women who smoked during pregnancy were 1.2 times at risk of delivering preterm than women who did not smoke.[4]

1. Preterm birth: Live birth born before 37 completed weeks of gestation.
2. Percents are based on records with known length of gestation.
3. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
4. See Technical Notes for information and methodology on relative risk.

LOW BIRTH WEIGHT LIVE BIRTHS[1]

Idaho Resident Live Births
1998-2002



► Idaho's low birth weight rate was significantly lower than the U.S. rates each year from 1998-2002. Although Idaho's low birth weight rate did not changed significantly from 1998-2002, Idaho's rates remained above the HP2010 goal of 5.0 percent.

Age of Mother					
Age of Mother	Total Live Births	Low Birth Weight Births	Birth Weight Unknown	Percent Low Birth Weight[2]	Significantly Higher than the Total[3]
Total	101,184	6,365	126	6.3	
<15	112	11	-	9.8	
15-17	3,433	258	6	7.5	Yes
18-19	8,038	637	7	7.9	Yes
20-24	31,979	1,989	26	6.2	
25-29	29,121	1,603	36	5.5	
30-34	18,856	1,089	27	5.8	
35-39	7,851	592	15	7.6	Yes
40-44	1,683	165	4	9.8	Yes
45+	100	21	1	21.2	Yes
Not stated	11	-	4	N/A	N/A

► Women aged 35 or more years were at 1.3 times the risk of having a low birth weight baby than women aged less than 35 years.[4]

Mother's Educational Attainment for Age					
Mother's Educational Attainment for Age	Total Live Births	Low Birth Weight Births	Birth Weight Unknown	Percent Low Birth Weight[2]	Significantly Higher than the Total[3]
Total	101,184	6,365	126	6.3	
Low	14,110	1,136	23	8.1	Yes
Average	34,713	2,240	42	6.5	
High	48,448	2,627	35	5.4	
Not Stated	3,913	362	26	N/A	N/A

► Women with a low educational attainment for their age were 1.4 times at risk of having a low birth weight baby than women with an average to high educational attainment for their age.[4]

Marital Status of Mother					
Marital Status	Total Live Births	Low Birth Weight Births	Birth Weight Unknown	Percent Low Birth Weight[2]	Significantly Higher than the Total[3]
Total	101,184	6,365	126	6.3	
Not Married	22,117	1,777	25	8.0	Yes
Married	79,067	4,588	101	5.8	

► Low birth weight rates were significantly higher in out-of-wedlock births.

1. Low birth weight live birth: Live birth weighing less than 2,500 grams.
2. Percents are based on records with known birth weight.
3. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
4. See Technical Notes for information and methodology on relative risk.

LOW BIRTH WEIGHT LIVE BIRTHS[1]

Idaho Resident Live Births

1998-2002

Tobacco Use					
Tobacco Use	Total Live Births	Low Birth Weight Births	Birth Weight Unknown	Percent Low Birth Weight[2]	Significantly Higher than the Total[3]
Total	101,184	6,365	126	6.3	
No	88,822	5,084	95	5.7	
Yes	11,830	1,219	14	10.3	Yes
Unknown	532	62	17	N/A	N/A

► Women who smoked during pregnancy were at 1.8 times the risk of having a low birth weight baby than women who did not smoke during pregnancy.[4]

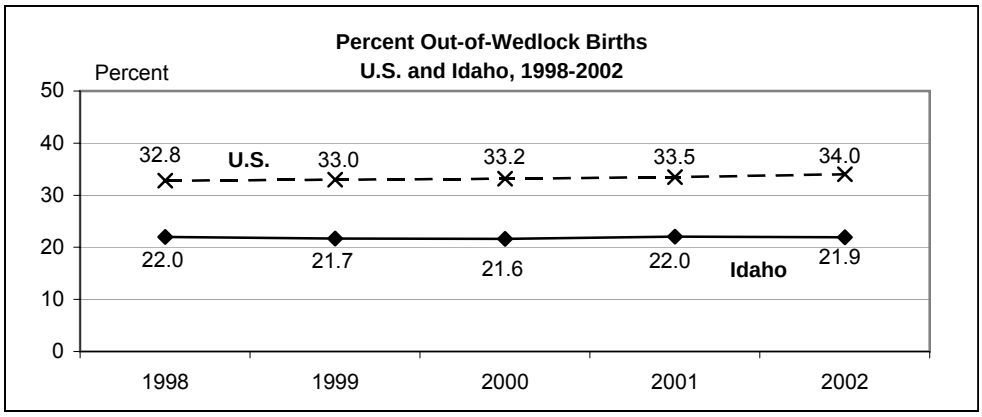
Payment Source for Delivery[5]					
Payment Source[5]	Total Live Births	Low Birth Weight Births	Birth Weight Unknown	Percent Low Birth Weight[2]	Significantly Higher than the Total[3]
Total	101,184	6,365	126	6.3	
None	353	18	3	5.1	
Self Pay	11,013	664	22	6.0	
HMO	1,451	54	2	3.7	
Other Health Ins.	53,226	2,988	35	5.6	
Medicaid	28,280	1,902	25	6.7	Yes
Other Governmental	1,814	53	1	2.9	
Unknown	5,047	686	38	N/A	N/A

► Women using Medicaid as the payment source for delivery were at 1.2 times the risk of having a low birth weight baby than women using a payment source other than Medicaid.[4]

1. Low birth weight live birth: Live birth weighing less than 2,500 grams.
2. Percents are based on records with known birth weight.
3. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
4. See Technical Notes for information and methodology on relative risk.
5. Payment source for delivery may change after the birth certificate is filed with the State of Idaho. Medicaid status data from the birth certificate may not match Medicaid data.

OUT-OF-WEDLOCK BIRTHS

Idaho Resident Live Births
1998-2002



► Even though the percent of out-of-wedlock births is significantly lower in Idaho than the U.S. from 1998 to 2002, there are disparities in the rate births to un-married women by age, race, ethnicity, educational attainment, and payment source.

Age of Mother					
Age of Mother	Total Live Births	Out-of-Wedlock	Unknown	Percent Out-of-Wedlock	Significantly Higher than the Total[1]
Total	101,184	22,117	-	21.9	
<15	112	103	-	92.0	Yes
15-17	3,433	2,612	-	76.1	Yes
18-19	8,038	4,544	-	56.5	Yes
20-24	31,979	8,651	-	27.1	Yes
25-29	29,121	3,546	-	12.2	
30-34	18,856	1,681	-	8.9	
35-39	7,851	781	-	9.9	
40-44	1,683	184	-	10.9	
45+	100	10	-	10.0	
Not stated	11	5	-	N/A	N/A

► Young mothers, aged <25 were significantly more likely to have a baby out-of-wedlock than women of all ages.

Race of Mother					
Race of Mother	Total Live Births	Out-of-Wedlock	Unknown	Percent Out-of-Wedlock	Significantly Higher than the Total[1]
Total	101,184	22,117	-	21.9	
White	96,786	20,493	-	21.2	
Black	412	166	-	40.3	Yes
American Indian	1,616	933	-	57.7	Yes
Asian/Pacific Islander	1,419	209	-	14.7	
Other race	25	4	-	N/A	N/A
Not stated	926	312	-	N/A	N/A

► American Indian women (57.7 percent) and Black women (40.3 percent) were significantly more likely to have a baby out-of-wedlock than women of all races (21.9 percent).

Ethnicity of Mother					
Ethnicity of Mother	Total Live Births	Out-of-Wedlock	Unknown	Percent Out-of-Wedlock	Significantly Higher than the Total[1]
Total	101,184	22,117	-	21.9	
Non-Hispanic	87,075	17,451	-	20.0	
Hispanic	12,916	4,319	-	33.4	Yes
Not stated	1,193	347	-	N/A	N/A

► Hispanic women (33.4 percent) were significantly more likely to have a baby out-of-wedlock than all women (21.9 percent).

1. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.

OUT-OF-WEDLOCK BIRTHS

Idaho Resident Live Births

1998-2002

Mother's Educational Attainment for Age					
Mother's Educational Attainment for Age	Total Live Births	Out-of-Wedlock	Unknown	Percent Out-of-Wedlock	Significantly Higher than the Total[1]
Total	101,184	22,117	-	21.9	
Low	14,110	5,665	-	40.1	Yes
Average	34,713	10,836	-	31.2	Yes
High	48,448	4,374	-	9.0	
Not Stated	3,913	1,242	-	N/A	N/A

► Women with a low or average educational attainment for their age were significantly more likely than all women to have a baby out-of-wedlock.

Payment Source for Delivery[2]					
Payment Source[2]	Total Live Births	Out-of-Wedlock	Unknown	Percent Out-of-Wedlock[1]	Significantly Higher than the Total[1]
Total	101,184	22,117	-	21.9	
None	353	65	-	18.4	
Self Pay	11,013	3,108	-	28.2	Yes
HMO	1,451	142	-	9.8	
Other Health Ins.	53,226	4,792	-	9.0	
Medicaid	28,280	12,694	-	44.9	Yes
Other Governmental	1,814	296	-	16.3	
Unknown	5,047	1,020	-	N/A	N/A

► Medicaid recipients (44.9 percent) were significantly more likely than all women (21.9 percent) to have a baby out-of-wedlock.

1. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
2. Payment source for delivery may change after the birth certificate is filed with the State of Idaho. Medicaid status data from the birth certificate may not match Medicaid data.

OUT-OF-WEDLOCK BIRTHS

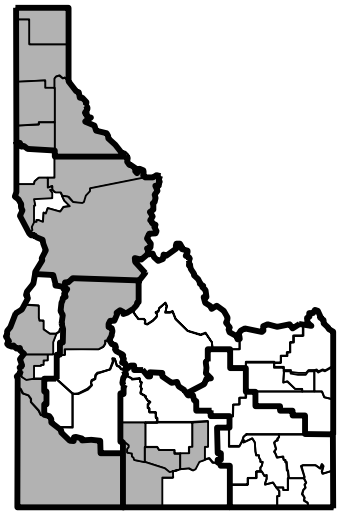
Idaho Resident Live Births

1998-2002

Mother's Resident County					
Residence	Total Live Births	Out-of-Wedlock	Unknown	Percent Out-of-Wedlock[1]	Significantly Higher than the State[1]
IDAHO	101,184	22,117	-	21.9	
District 1	11,240	3,054	-	27.2	Yes
Benewah	572	193	-	33.7	Yes
Bonner	1,891	556	-	29.4	Yes
Boundary	637	162	-	25.4	Yes
Kootenai	7,413	1,894	-	25.5	Yes
Shoshone	727	249	-	34.3	Yes
District 2	5,750	1,418	-	24.7	Yes
Clearwater	381	120	-	31.5	Yes
Idaho	771	220	-	28.5	Yes
Latah	2,131	289	-	13.6	
Lewis	202	54	-	26.7	
Nez Perce	2,265	735	-	32.5	Yes
District 3	17,033	4,393	-	25.8	Yes
Adams	122	30	-	24.6	
Canyon	12,809	3,317	-	25.9	Yes
Gem	985	198	-	20.1	
Owyhee	899	239	-	26.6	Yes
Payette	1,522	423	-	27.8	Yes
Washington	696	186	-	26.7	Yes
District 4	27,078	5,193	-	19.2	
Ada	23,843	4,571	-	19.2	
Boise	344	85	-	24.7	
Elmore	2,559	440	-	17.2	
Valley	332	97	-	29.2	Yes
District 5	12,853	3,198	-	24.9	Yes
Blaine	1,241	243	-	19.6	
Camas	51	13	-	25.5	
Cassia	1,928	447	-	23.2	
Gooding	1,118	299	-	26.7	Yes
Jerome	1,625	412	-	25.4	Yes
Lincoln	326	63	-	19.3	
Minidoka	1,762	491	-	27.9	Yes
Twin Falls	4,802	1,230	-	25.6	Yes
District 6	13,604	2,695	-	19.8	
Bannock	6,863	1,402	-	20.4	
Bear Lake	420	64	-	15.2	
Bingham	3,710	859	-	23.2	
Butte	186	28	-	15.1	
Caribou	520	70	-	13.5	
Franklin	1,070	95	-	8.9	
Oneida	288	40	-	13.9	
Power	547	137	-	25.0	
District 7	13,626	2,166	-	15.9	
Bonneville	7,164	1,354	-	18.9	
Clark	87	21	-	24.1	
Custer	183	34	-	18.6	
Fremont	1,005	173	-	17.2	
Jefferson	1,748	250	-	14.3	
Lemhi	343	70	-	20.4	
Madison	2,493	174	-	7.0	
Teton	603	90	-	14.9	

► The percent of out-of-wedlock live births ranged from a high of 34.3 percent in Shoshone County, to a low of 7.0 percent in Madison County.

► The percent of live births to unmarried women was significantly higher in District 1 (27.2 percent), District 2 (24.7 percent), District 3 (25.8 percent), and District 5 (24.9 percent) than the entire state (21.9 percent).

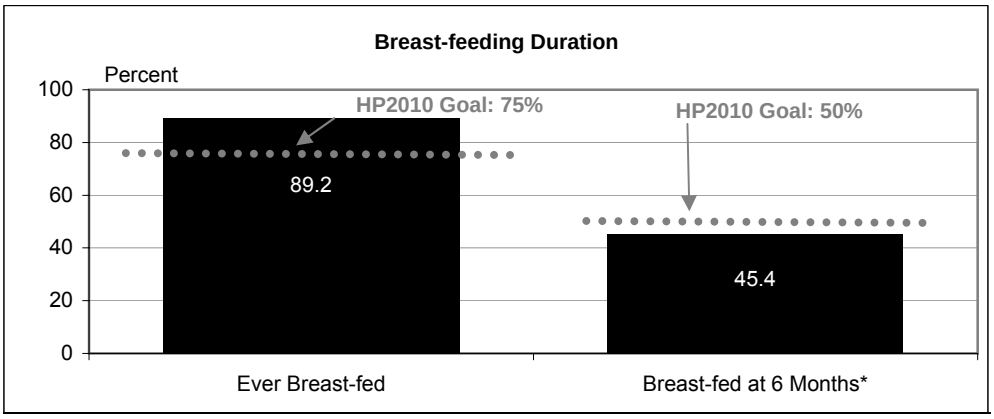


1. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.

PREVALENCE OF BREAST-FEEDING

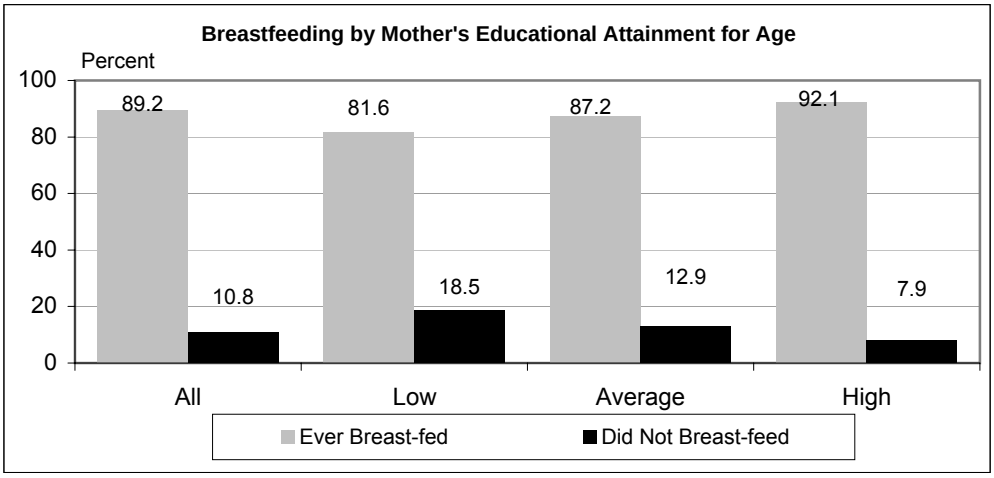
Idaho PRATS

2001

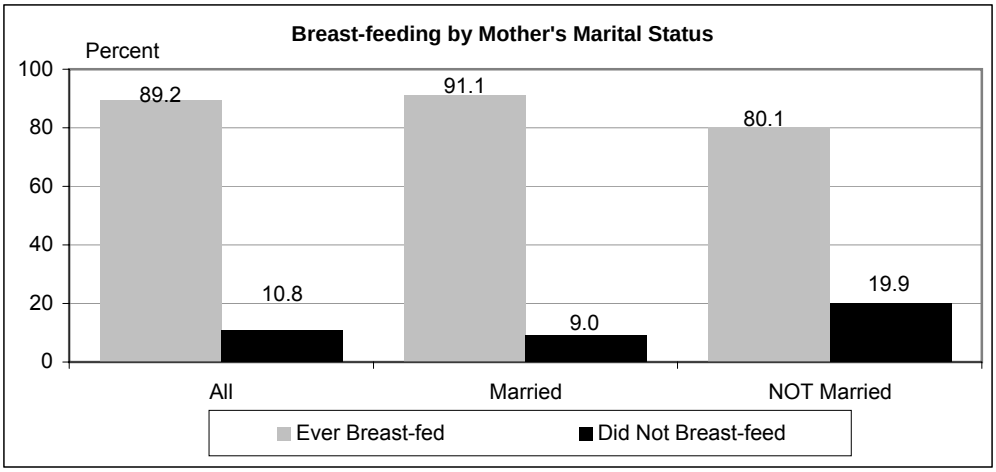


* Among women whose child was at least 6 months old.

► Despite being higher than the HP2010 goal for ever breast-feeding, Idaho was lower than the HP2010 goal for breast-feeding at six months.



► Mothers with a low educational attainment for their age were significantly less likely to breastfeed (81.6 percent) than mothers with high educational attainment (92.1 percent).

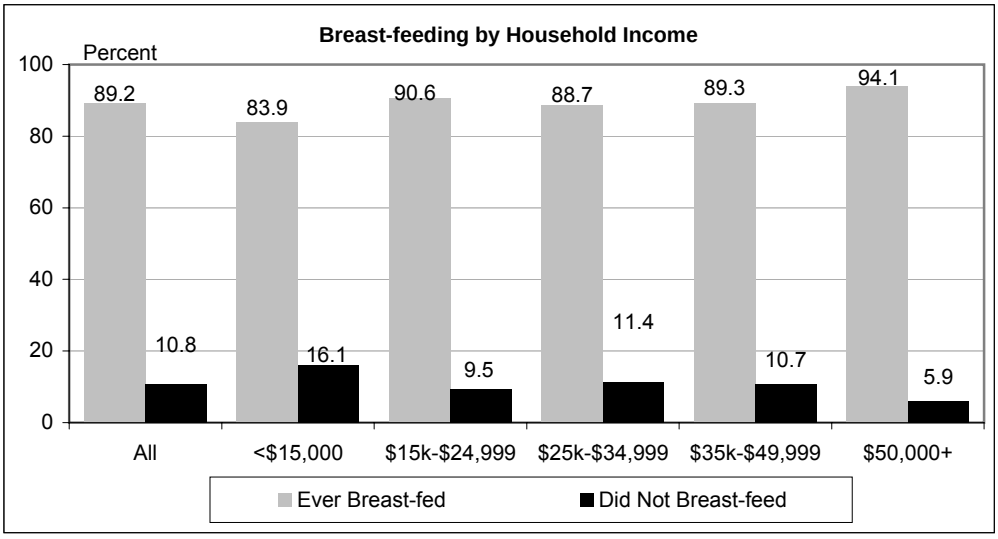


► Breast-feeding rates were significantly lower for un-wed mothers (80.1 percent) than for married mothers (91.1 percent).

PREVALENCE OF BREAST-FEEDING

Idaho PRATS

2001

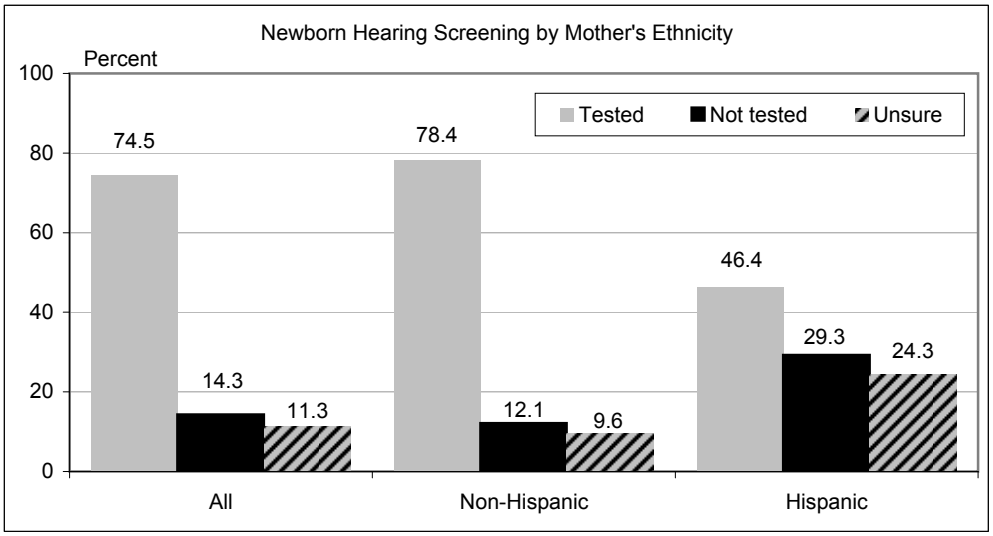


► Babies born to mothers with a household income of less than $15,000 were significantly less likely to be breast-fed (83.9 percent) than babies born to mothers in the highest income category (94.1 percent).

NEWBORN HEARING SCREENING

Idaho PRATS

2001

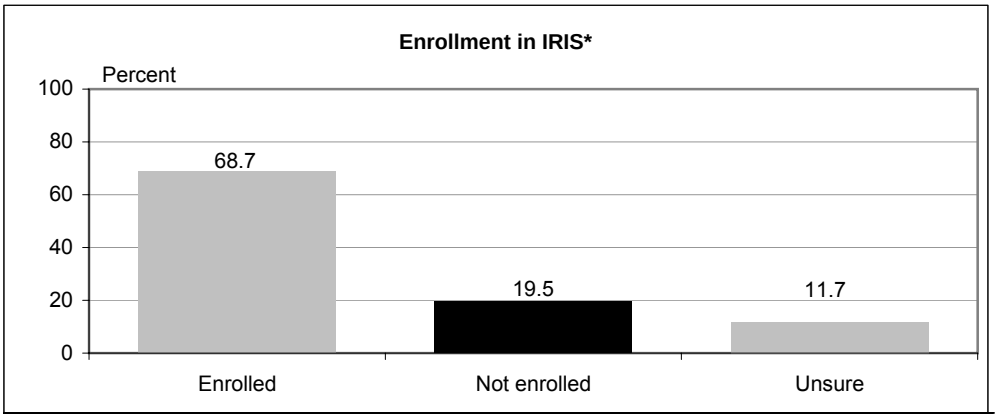


► Babies of Hispanic mothers were 1.7 times less likely to have their hearing screened than babies of non-Hispanic mothers.

IMMUNIZATIONS

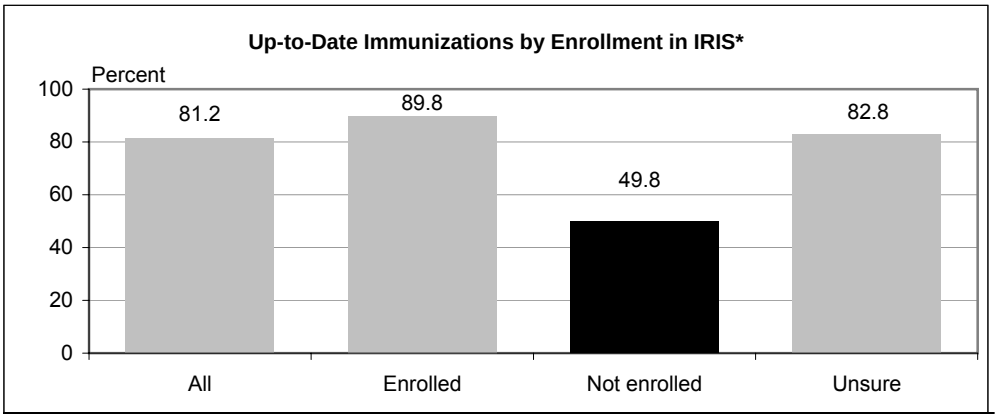
Idaho PRATS

2001



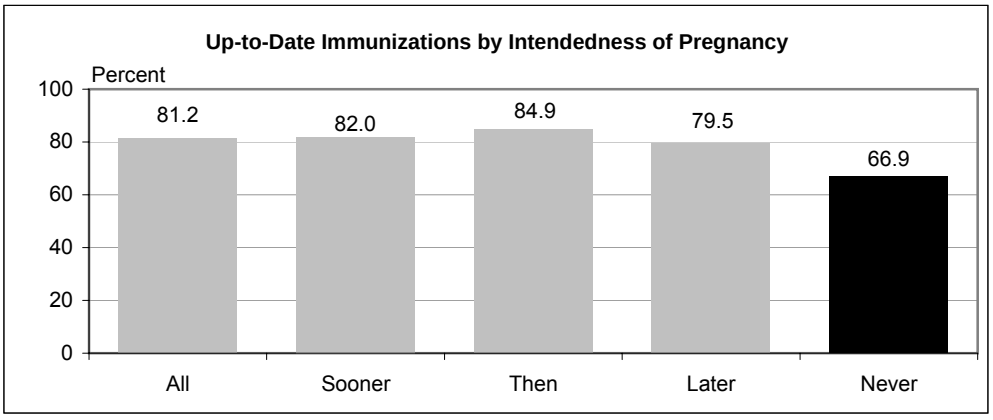
*IRIS is Idaho's Immunization Reminder Information System.

► Two-thirds of Idaho resident adult mothers reported that their baby was enrolled in IRIS.



*IRIS is Idaho's Immunization Reminder Information System.

► Mothers whose babies were enrolled in IRIS were 1.8 times more likely to report that their baby's immunizations were up-to-date than mothers whose babies were not enrolled.



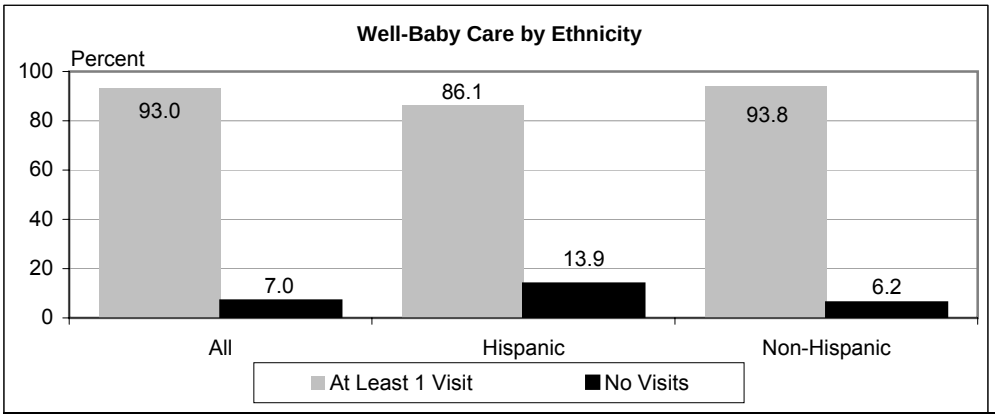
► Mothers who never intended on getting pregnant were significantly less likely to report that their babies' immunizations were up-to-date than all mothers combined.

Note: Data may differ from IRIS data.

WELL-BABY CARE

Idaho PRATS

2001

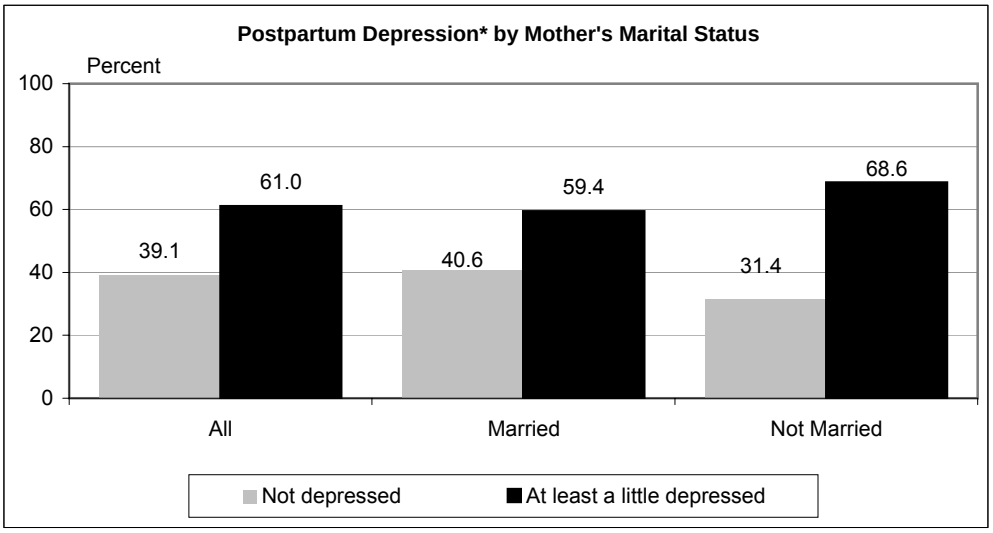


► Hispanic mothers were 2.2 times more likely to report that their baby had not been to any well-child visits than non-Hispanic mothers.

POSTPARTUM DEPRESSION

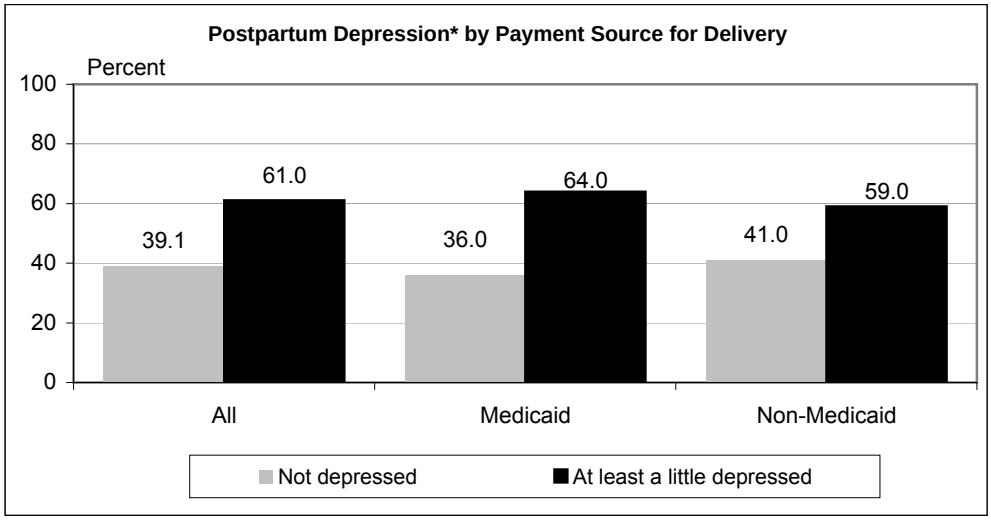
Idaho PRATS

2001



► Mothers who were not married were significantly more likely to be at least a little depressed during the three months after delivery than married mothers.

* Postpartum depression during 3 months after delivery.



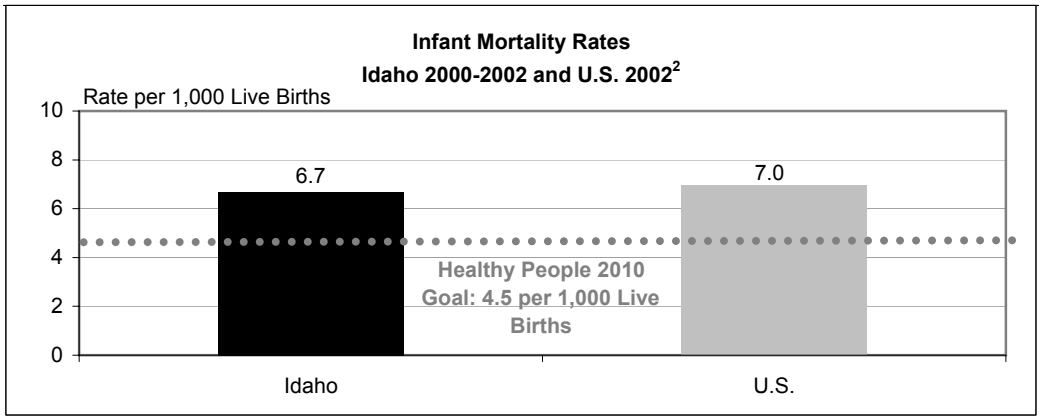
► Mothers whose delivery was paid for by Medicaid were significantly more likely to be at least a little depressed during the three months after delivery than mothers whose delivery was paid for by some other source.

* Postpartum depression during 3 months after delivery.

INFANT MORTALITY AGED <1

Idaho Resident Linked Birth/Infant Deaths[1]

2000-2002



► Idaho's infant death rate, though lower than the U.S. rate, is higher than the HP2010 goal of 4.5 per 1,000 live births.

Cause of Death, Idaho 2000-2002 and U.S. 2002					
	Idaho		U.S.		Idaho Significantly Higher than the U.S.[4]
CAUSE OF DEATH	Number	Rate Per 1,000 Live Births[3]	Number	Rate Per 1,000 Live Births[3]	
All Causes	414	6.7	27,970	6.8	
1 Congenital malformations, deformations and chromosomal abnormalities (birth defects)	121	2.0	5,630	1.4	Yes
2 Sudden infant death syndrome	47	0.8	2,295	0.6	
3 Disorders related to short gestation and low birth weight, not elsewhere classified	44	0.7	4,636	1.2	
4 Newborn affected by maternal complications of pregnancy	23	0.4	1,704	0.4	
5 Newborn affected by complications of placenta, cord and membranes	18	0.3	1,013	0.3	

► Infant mortality due to birth defects was significantly higher in Idaho than in the U.S.

Ethnicity of Mother			
ETHNICITY OF MOTHER	Number	Rate Per 1,000 Live Births[3]	Significantly Higher than the Total[4]
Total	414	6.7	
Hispanic	73	9.0	Yes
Non-Hispanic	333	6.3	
Not Stated	8	N/A	N/A

► Infant mortality rates were significantly higher for Hispanic women than for all women in Idaho.

1. See Technical Notes for information and methodology on the linked birth/infant death file.
2. Idaho 2000-2002 birth period linked file and U.S. 2002 death period linked file.
3. Infant death rate: Number of infant deaths per 1,000 live births, based on the linked birth/infant death file. Data may differ from rates calculated from the live birth file and the mortality file.
4. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.

INFANT MORTALITY AGED <1

Idaho Resident Linked Birth/Infant Deaths[1]

2000-2002

Age of Mother			
AGE OF MOTHER	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
All Ages	414	6.7	
<15	1	18.9	**
15-17	18	9.7	
18-19	38	8.0	
20-24	127	6.4	
25-29	117	6.6	
30-34	52	4.4	
35-39	50	10.3	Yes
40-44	10	9.6	
45+	1	15.9	**

► Infant mortality rates were significantly higher for mothers aged 35 to 39 than for women of all ages combined.

Trimester Prenatal Care Began			
TRIMESTER PRENATAL CARE BEGAN	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
Total	414	6.7	
First	303	6.2	
Second	44	5.0	
Third	10	6.0	
No Prenatal Care	14	27.6	Yes
Not Stated	43	N/A	N/A

► Babies born to women with no prenatal care were at 4.6 times the risk of dying during their first year than babies born to women with prenatal care.[4]

Plurality			
PLURALITY	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
Total	414	6.7	
Single Birth	367	6.1	
Multiple Birth	47	26.8	Yes

► Babies born in multiple births were at 4.4 times the risk of infant mortality than babies born in singleton deliveries.[4]

Gestation			
GESTATION	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
Total	414	6.7	
Term	168	3.0	
Preterm	236	37.4	Yes
Unknown	10	N/A	N/A

► Babies born before 37 completed weeks of gestation were at 12.3 times the risk of infant deaths than full term babies.[4]

1. See Technical Notes for information and methodology on the linked birth/infant death file.
2. Infant death rate: Number of infant deaths per 1,000 live births, based on the linked birth/infant death file. Data may differ from rates calculated from the live birth file and the mortality file.
3. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
4. See Technical Notes for information and methodology on relative risk.

** Does not meet minimum requirement to test for significance (<10 deaths).

INFANT MORTALITY AGED <1

Idaho Resident Linked Birth/Infant Deaths[1]

2000-2002

Birth Weight			
BIRTH WEIGHT	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
Total	414	6.7	
Normal Birth weight	165	2.8	
Low Birth weight	240	60.3	Yes
Unknown	9	N/A	N/A

► Low birth weight babies had 21.2 times the risk of infant deaths as non-low birth weight babies.[4]

Marital Status			
MARITAL STATUS	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
Total	414	6.7	
Married	298	6.2	
Not Married	116	8.6	Yes

► Unmarried women are 1.4 times at risk of having their baby die during the first year than married women.[4]

Tobacco Use During Pregnancy			
TOBACCO USE DURING PREGNANCY	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
Total	414	6.7	
Yes	66	9.7	Yes
No	341	6.2	
Unknown	7	N/A	N/A

► Women who used tobacco during pregnancy were at 1.6 times the risk of having a baby die in the first year than women who did not use tobacco during pregnancy.[4]

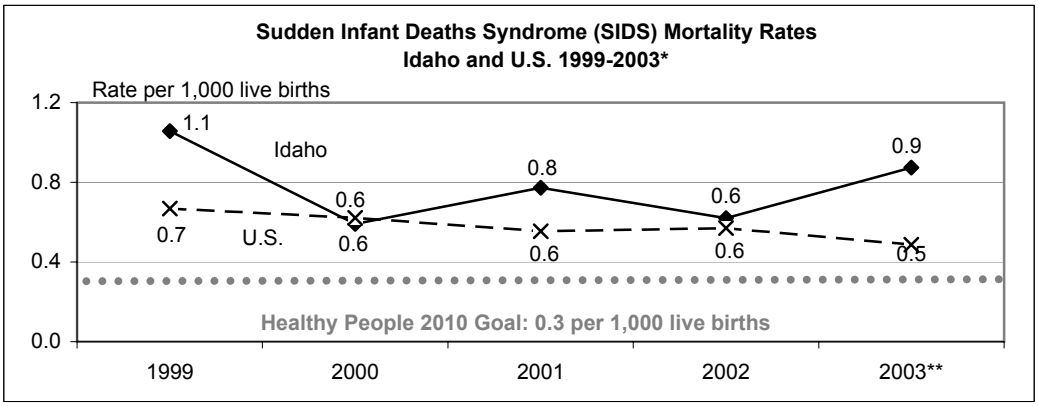
Mother's Educational Attainment for Age			
EDUCATIONAL ATTAINMENT	Number	Rate Per 1,000 Live Births[2]	Significantly Higher than the Total[3]
Total	414	6.7	
Low	81	9.5	Yes
Average	146	6.9	
High	153	5.0	
Unknown	34	N/A	N/A

► Babies born to mothers with low educational attainment were at 1.6 times the risk of dying before age of 1 than babies born to mothers with average or high education attainment.[4]

1. See Technical Notes for information and methodology on the linked birth/infant death file.
2. Infant death rate: Number of infant deaths per 1,000 live births, based on the linked birth/infant death file. Data may differ from rates calculated from the live birth file and the mortality file.
3. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
4. See Technical Notes for information and methodology on relative risk.

SIDS MORTALITY AGED <1

Idaho and U.S. Resident Deaths
1999-2003

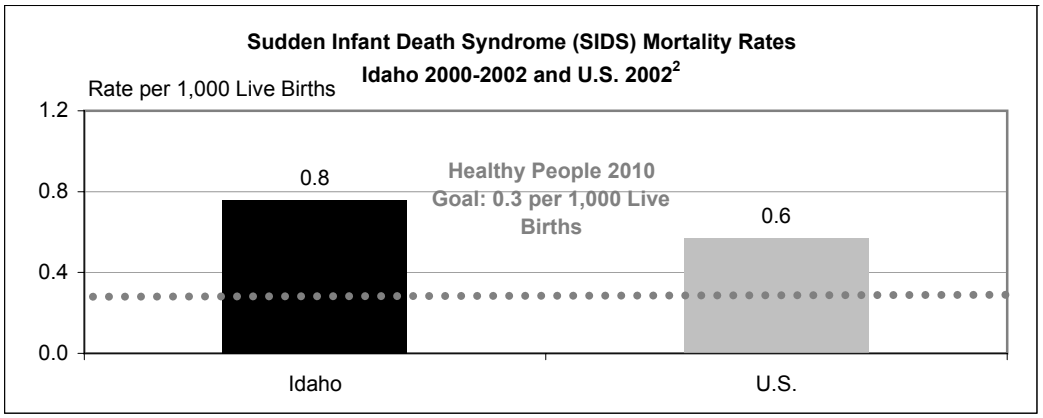


► Idaho's SIDS mortality rate has historically been higher than the U.S. rate. Idaho's rate was 17.3 percent lower in 2003 than 1999. At the same time**, the U.S. rate declined 27.2 percent.

* Rates in this chart are based on infant deaths in the given year per 1,000 births in the given year.
** U.S. rate in 2003 is preliminary.

SIDS MORTALITY AGED <1

Idaho Resident Linked Birth/Infant Deaths[1]
2000-2002



► Idaho's SIDS mortality rate is higher than the HP2010 goal of 0.3 per 1,000 live births and higher than the U.S. rate.

Marital Status			
MARITAL STATUS	Number	Rate Per 1,000 Live Births[3]	Significantly Higher than the Total[4]
Total	47	0.8	
Married	25	0.5	
Not Married	22	1.6	Yes

► Unmarried women were significantly more likely to have a baby die of SIDS.

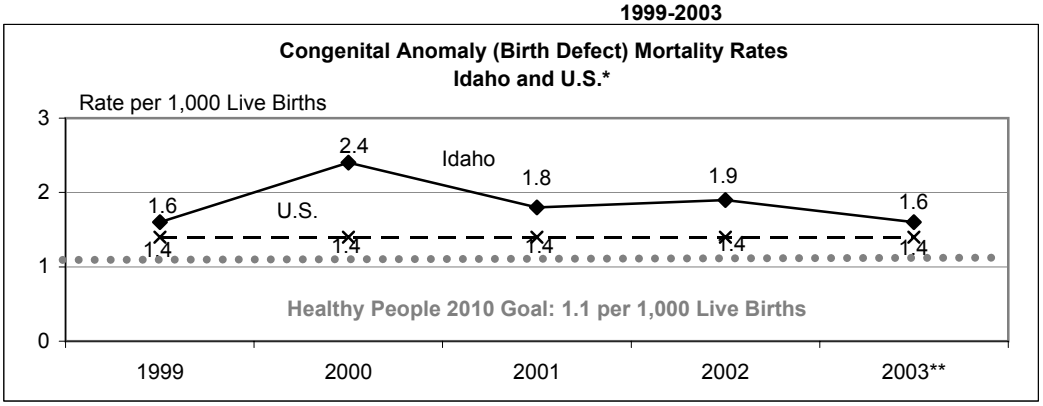
Tobacco Use During Pregnancy			
TOBACCO USE DURING PREGNANCY	Number	Rate Per 1,000 Live Births[3]	Significantly Higher than the Total[4]
Total	47	0.8	
Yes	18	2.6	Yes
No	29	0.5	

► Babies born to women who smoked during pregnancy were at 5.2 times the risk of dying of SIDS than babies born to women who did not smoke during pregnancy.[5]

1. See Technical Notes for information and methodology on the linked birth/infant death file.
2. Idaho 2000-2002 birth period linked file and U.S. 2002 death period linked file.
3. SIDS death rate: Number of SIDS deaths per 1,000 live births, based on the linked birth/infant death file. Data may differ from rates calculated from the live birth file and the mortality file.
4. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
5. See Technical Notes for information and methodology on relative risk.

BIRTH DEFECTS MORTALITY AGED <1

Idaho and U.S. Resident Deaths
1999-2003

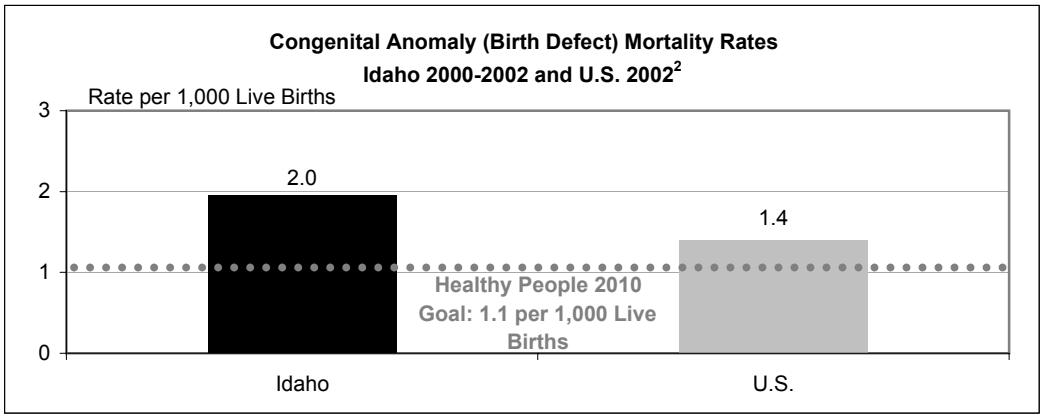


► Idaho's congenital anomalies mortality rate ranged from 1.6 per 1,000 live births to 2.4 per 1,000 live births from 1999 to 2003. Idaho's rate remained higher than the U.S. rate of 1.4 per 1,000 live births from 1999 to 2003**.

* Rates in this chart are based on infant deaths in the given year per 1,000 births in the given year.
** U.S. rate in 2003 is preliminary.

BIRTH DEFECTS MORTALITY AGED <1

Idaho Resident Linked Birth/Infant Deaths[1]
2000-2002



► Not only is Idaho's mortality rate due to congenital anomalies higher than the HP2010 goal of 1.1 per 1,000 live births, it is significantly higher than the U.S. rate of 1.4 per 1,000 live births.

Gestation			
GESTATION	Number	Rate Per 1,000 Live Births[3]	Significantly Higher than the Total[4]
Total	121	2.0	
Term	58	1.0	
Preterm	62	9.8	Yes
Unknown	1	N/A	N/A

► Babies born before 37 completed weeks of gestation were 9.8 times at risk of dying of birth defects during the first year of life as full term babies.[5]

Birth Weight			
BIRTH WEIGHT	Number	Rate Per 1,000 Live Births[3]	Significantly Higher than the Total[4]
Total	121	2.0	
Normal Birth Weight	45	0.7	
Low Birth Weight	73	18.3	Yes
Unknown	3	N/A	N/A

► Low birth weight babies were 23.6 times at risk of infant death due to birth defects as normal birth weight babies (2,500+ grams).[5]

1. See Technical Notes for information and methodology on the linked birth/infant death file.
2. Idaho 2000-2002 birth period linked file and U.S. 2002 death period linked file.
3. Birth Defects death rate: Number of Birth Defect deaths per 1,000 live births, based on the linked birth/infant death file. Data may differ from rates calculated from the mortality file.
4. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
5. See Technical Notes for information and methodology on relative risk.

CHILDREN AGED 1-4

IDAHO RESIDENT POPULATION

Children Aged 1-4

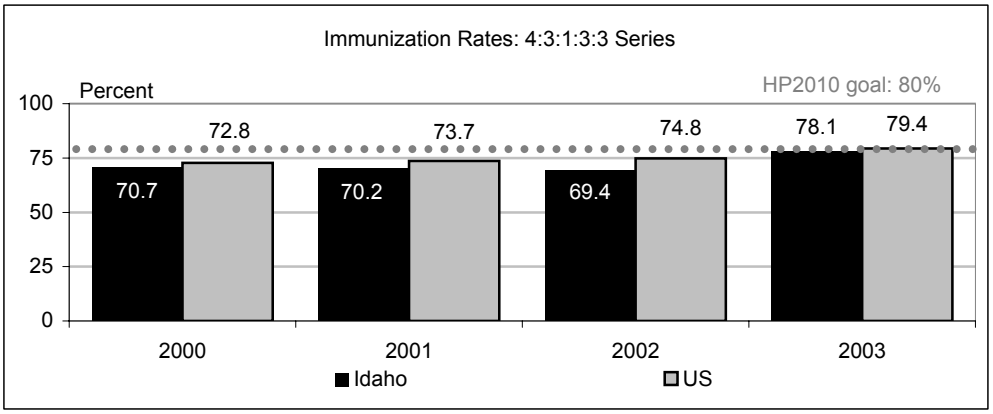
2002

Residence	Total	Sex		Race				Hispanic Ethnicity
		Male	Female	White	Black	American Indian	Asian/Pacific Islander	
Idaho	79,724	40,917	38,807	75,994	1,119	1,492	1,119	11,101
District 1	9,320	4,757	4,563	8,909	80	263	68	337
District 2	4,299	2,205	2,094	3,945	34	264	56	117
District 3	13,413	6,823	6,590	12,929	165	153	166	3,624
District 4	21,889	11,160	10,729	20,589	538	168	594	1,852
District 5	9,920	5,124	4,796	9,656	93	99	72	2,591
District 6	10,487	5,435	5,052	9,838	94	468	87	1,292
District 7	10,396	5,413	4,983	10,128	115	77	76	1,288
Ada	19,276	9,860	9,416	18,187	409	146	534	1,437
Adams	105	57	48	102	-	2	1	1
Bannock	5,054	2,601	2,453	4,706	60	223	65	362
Bear Lake	341	185	156	332	3	5	1	11
Benewah	427	225	202	346	4	77	-	12
Bingham	2,938	1,511	1,427	2,693	22	209	14	637
Blaine	985	523	462	962	3	7	13	243
Boise	343	171	172	334	4	4	1	21
Bonner	1,623	811	812	1,587	8	22	6	52
Bonneville	5,585	2,925	2,660	5,397	81	53	54	679
Boundary	551	283	268	515	4	29	3	30
Butte	141	68	73	141	-	-	-	5
Camas	41	19	22	41	-	-	-	4
Canyon	10,183	5,127	5,056	9,781	145	115	142	2,916
Caribou	419	211	208	419	-	-	-	27
Cassia	1,537	768	769	1,505	4	21	7	454
Clark	86	46	40	84	2	-	-	40
Clearwater	287	149	138	273	-	12	2	11
Custer	150	70	80	146	-	4	-	12
Elmore	2,025	1,008	1,017	1,833	118	17	57	377
Franklin	880	489	391	867	6	5	2	64
Fremont	797	428	369	786	6	3	2	155
Gem	790	387	403	772	5	11	2	108
Gooding	885	458	427	861	15	6	3	269
Idaho	599	315	284	576	1	22	-	11
Jefferson	1,394	744	650	1,363	11	11	9	194
Jerome	1,234	603	631	1,205	11	16	2	417
Kootenai	6,120	3,124	2,996	5,875	62	125	58	226
Latah	1,538	782	756	1,467	15	21	35	41
Lemhi	299	132	167	296	1	2	-	13
Lewis	151	81	70	140	3	8	-	4
Lincoln	258	136	122	255	1	2	-	43
Madison	1,616	823	793	1,589	13	4	10	108
Minidoka	1,230	627	603	1,197	13	17	3	488
Nez Perce	1,724	878	846	1,489	15	201	19	50
Oneida	247	118	129	244	2	1	-	19
Owyhee	620	341	279	601	5	11	3	220
Payette	1,194	622	572	1,160	10	9	15	238
Power	467	252	215	436	1	25	5	167
Shoshone	599	314	285	586	2	10	1	17
Teton	469	245	224	467	1	-	1	87
Twin Falls	3,750	1,990	1,760	3,630	46	30	44	673
Valley	245	121	124	235	7	1	2	17
Washington	521	289	232	513	-	5	3	141

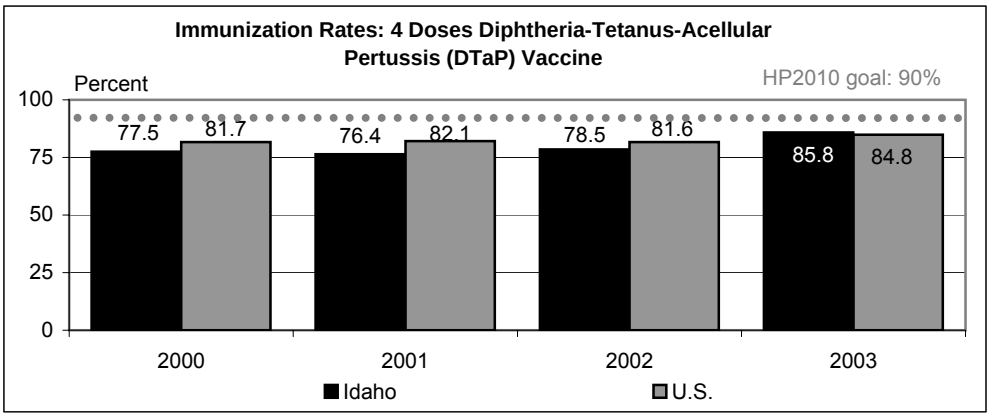
July 1, 2002 bridge-race population estimates, U.S. Census Bureau and National Center for Health Statistics, Internet release August 8, 2003.

IMMUNIZATIONS

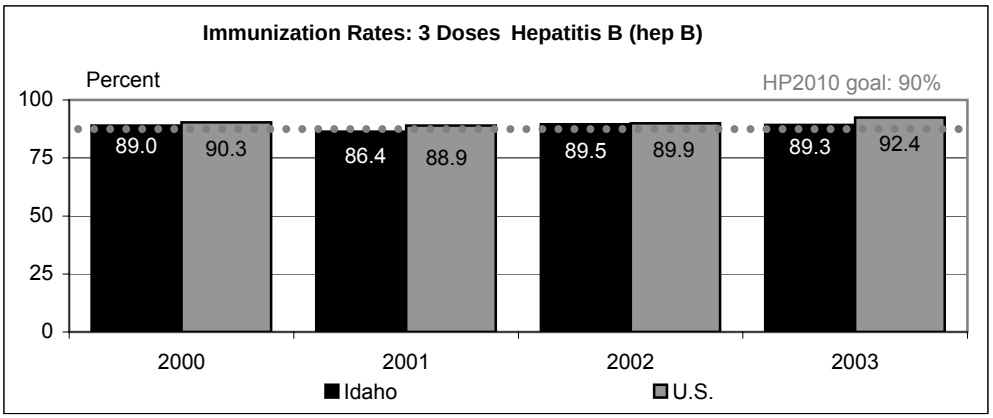
Idaho and U.S. Immunizations Among 19-35 Month Olds
2000-2003



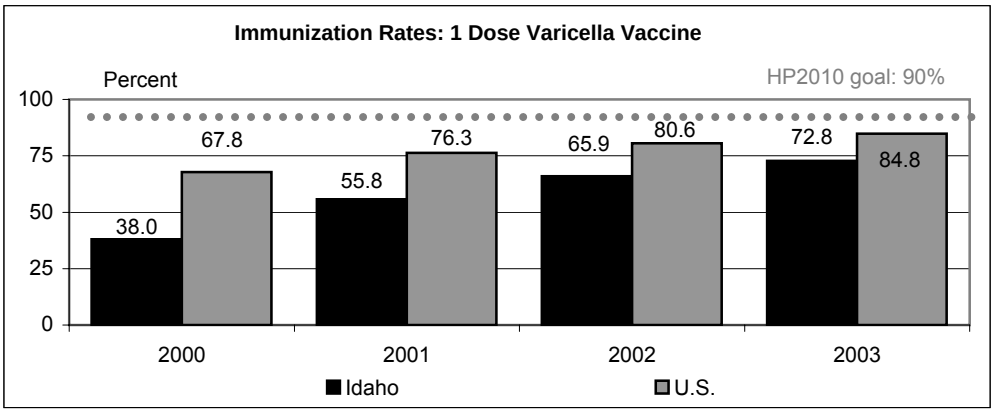
► Neither Idaho nor the U.S. met the HP 2010 goal of 80 percent of children aged 19 to 35 months immunized with the 4:3:1:3:3 Series in 2003. The 4:3:1:3:3 series is 4 DTaP, 3 polio, 1 MMR, 3 Hib, and 3 hep B.



► Neither Idaho nor the U.S. met the HP 2010 goal of 90 percent of children aged 19 to 35 months immunized with 4 doses Diphtheria-Tetanus-Acellular Pertussis (DTaP) vaccine.



► In 2000 and 2003, the U.S. met the HP 2010 goal of 90 percent of children aged 19 to 35 months immunized with 3 doses Hepatitis B (hep B) vaccine. Idaho has not met the HP 2010 goal.

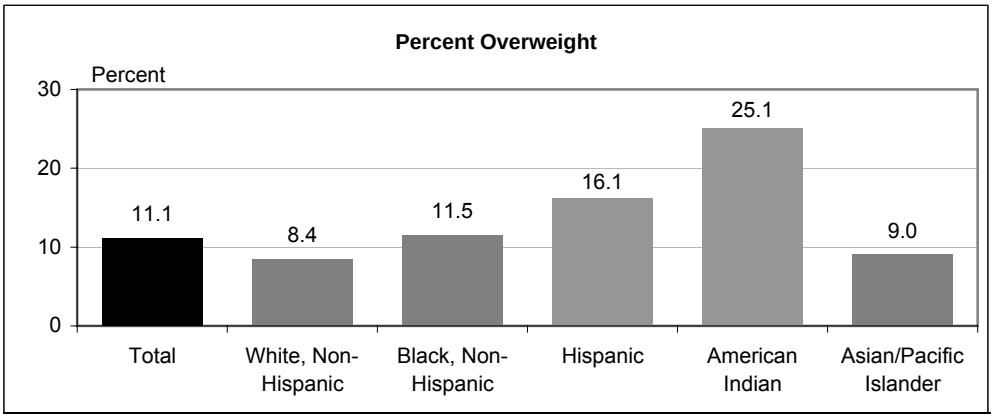


► Neither Idaho nor the U.S. met the HP 2010 goal of 90 percent of children aged 19 to 35 months immunized with the 1 dose varicella vaccine. Idaho and U.S. data are not adjusted for history of varicella (chicken pox) by age one.

GROWTH INDICATORS AGED 1-4

Pediatric Nutrition Surveillance

2003

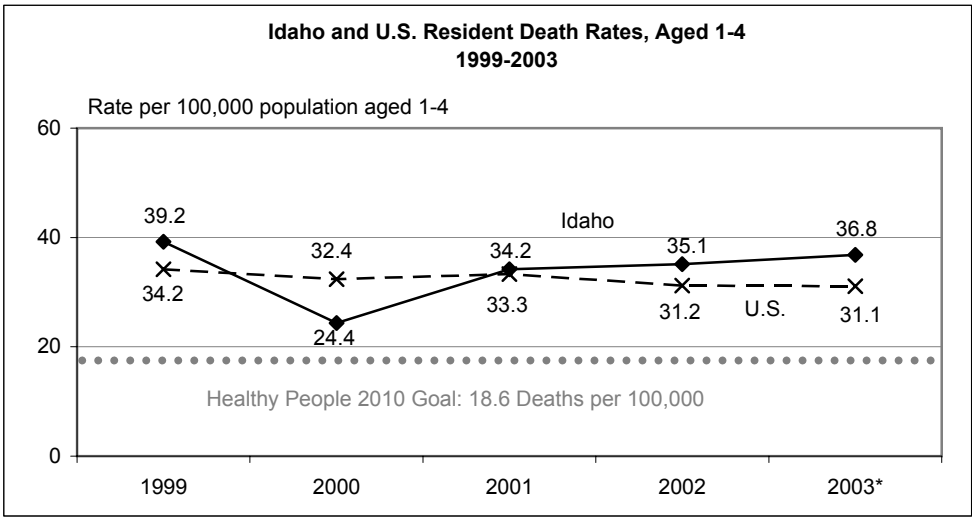


► The percent of American Indian and Hispanic children who were overweight was significantly higher than the state rate of 11.1 percent.

Based on 2000 CDC growth chart percentiles for weight-for-length for children under 2 years of age and BMI-for-age for children 2 years of age and older.

CHILD MORTALITY AGED 1-4

Idaho Resident Deaths
1999-2003



* U.S. rate in 2003 is preliminary.

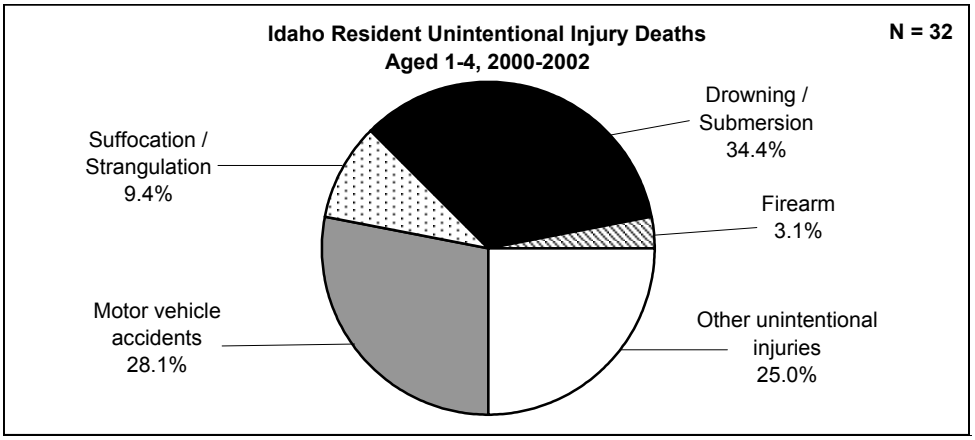
► From 1999 to 2003, Idaho's death rate for 1-4 year olds declined 6.0 percent from 39.2 per 100,000 to 36.8 per 100,000. During the same time period*, the U.S. rate decreased 9.1 percent. However, both Idaho and U.S. had rates higher than the HP2010 goal of 18.6 per 100,000 population for each of the five years.

Manner of Death, Idaho and U.S. 2000-2002

	IDAHO		U.S.		Idaho Significantly Higher than the U.S.
	Number	Rate per 100,000	Number	Rate per 100,000	
Total Deaths*	74	31.2	14,944	32.3	
Natural Deaths	37	15.6	8,364	18.1	
Unintentional Injury Deaths	32	13.5	5,181	11.2	
Drowning	11	4.6	1,405	3.0	
Motor Vehicle Accidents	9	3.8	1,887	4.1	
All other unintentional injury	12	5.1	1,889	4.1	
Intentional Injury Deaths	4	1.7	1,194	2.6	
Intentional Self-Harm (Suicide)	-	-	-	-	
Assault (Homicide)	4	1.7	1,194	2.6	

* Total includes deaths shown in table plus deaths of undetermined intent and deaths due to legal intervention, operations of war and their sequelae, and complications of medical and surgical care (not shown).
Note: 2002 is the latest year comparable U.S. data are available by manner of death.

► While lower than the U.S. rate, Idaho's three-year death rate for 1-4 year olds (31.2 per 100,000) was higher than the HP2010 goal of 18.6 per 100,000 population.



► Drowning and Submersion was the leading mechanism of unintentional injury deaths among 1-4 year olds.

CHILDREN AGED 5-9

IDAHO RESIDENT POPULATION

Children Aged 5-9

2002

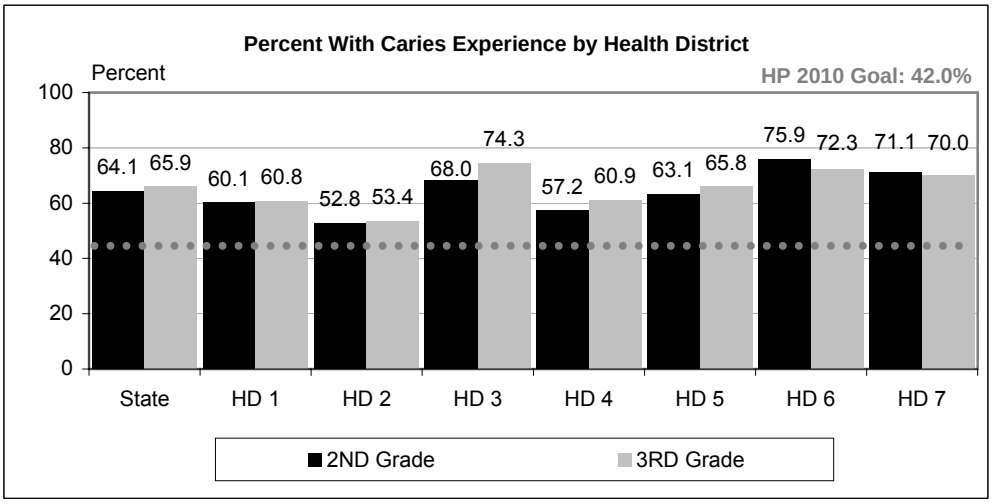
Residence	Total	Sex		Race				Hispanic Ethnicity
		Male	Female	White	Black	American Indian	Asian/Pacific Islander	
Idaho	99,553	50,964	48,589	94,749	1,390	1,994	1,420	13,183
District 1	12,364	6,330	6,034	11,852	99	325	88	448
District 2	5,623	2,930	2,693	5,190	56	311	66	175
District 3	17,136	8,743	8,393	16,492	181	250	213	4,523
District 4	26,771	13,709	13,062	25,167	614	251	739	2,168
District 5	12,209	6,221	5,988	11,870	112	142	85	2,866
District 6	12,601	6,452	6,149	11,728	149	614	110	1,523
District 7	12,849	6,579	6,270	12,450	179	101	119	1,480
Ada	23,597	12,092	11,505	22,209	501	218	669	1,684
Adams	174	103	71	169	-	5	-	12
Bannock	5,589	2,904	2,685	5,153	97	258	81	440
Bear Lake	463	220	243	459	2	2	-	12
Benewah	611	331	280	519	6	85	1	13
Bingham	3,691	1,880	1,811	3,323	35	311	22	730
Blaine	1,216	659	557	1,184	6	11	15	249
Boise	460	230	230	449	6	4	1	22
Bonner	2,254	1,164	1,090	2,200	16	30	8	57
Bonneville	6,982	3,547	3,435	6,712	128	66	76	810
Boundary	695	330	365	668	2	18	7	46
Butte	241	121	120	234	4	3	-	18
Camas	44	23	21	44	-	-	-	4
Canyon	12,437	6,321	6,116	11,939	152	165	181	3,501
Caribou	560	294	266	555	1	2	2	36
Cassia	1,832	917	915	1,795	4	27	6	487
Clark	80	40	40	77	1	2	-	32
Clearwater	447	238	209	436	1	7	3	20
Custer	257	121	136	255	-	2	-	12
Elmore	2,337	1,178	1,159	2,138	106	26	67	445
Franklin	1,124	532	592	1,114	4	5	1	77
Fremont	982	499	483	964	12	5	1	167
Gem	1,112	583	529	1,095	5	8	4	125
Gooding	1,075	541	534	1,053	12	8	2	319
Idaho	882	445	437	833	2	44	3	23
Jefferson	1,791	904	887	1,745	20	8	18	229
Jerome	1,533	787	746	1,493	13	21	6	443
Kootenai	8,037	4,116	3,921	7,725	71	170	71	308
Latah	1,806	964	842	1,706	28	33	39	46
Lemhi	455	254	201	453	-	2	-	16
Lewis	234	122	112	215	5	13	1	9
Lincoln	329	174	155	317	3	7	2	66
Madison	1,774	942	832	1,729	18	10	17	116
Minidoka	1,532	789	743	1,489	16	21	6	528
Nez Perce	2,254	1,161	1,093	2,000	20	214	20	77
Oneida	305	175	130	301	2	1	1	12
Owyhee	928	474	454	868	7	45	8	342
Payette	1,745	876	869	1,706	9	14	16	376
Power	628	326	302	589	4	32	3	198
Shoshone	767	389	378	740	4	22	1	24
Teton	528	272	256	515	-	6	7	98
Twin Falls	4,648	2,331	2,317	4,495	58	47	48	770
Valley	377	209	168	371	1	3	2	17
Washington	740	386	354	715	8	13	4	167

July 1, 2002 bridge-race population estimates, U.S. Census Bureau and National Center for Health Statistics, Internet release August 8, 2003.

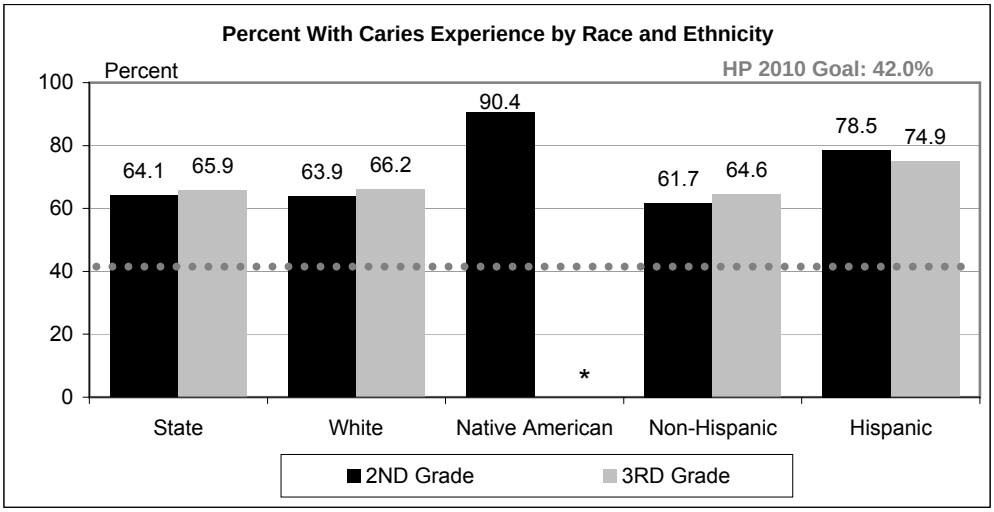
ORAL HEALTH, SECOND AND THIRD GRADERS

Idaho State Smile Survey

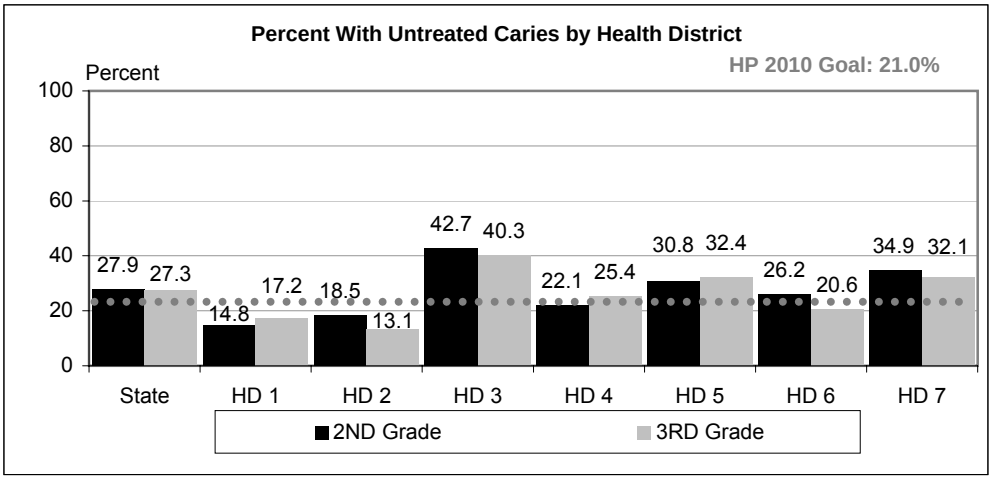
2001



► The proportion of Idaho's 2nd and 3rd graders with dental caries experience is higher than the HP 2010 goal of 42.0 percent for children aged 6-8.



► 90.4 percent of Native American 2nd graders had experienced dental caries in 2001, a rate far above the HP 2010 goal of 42.0 percent for children aged 6-8.



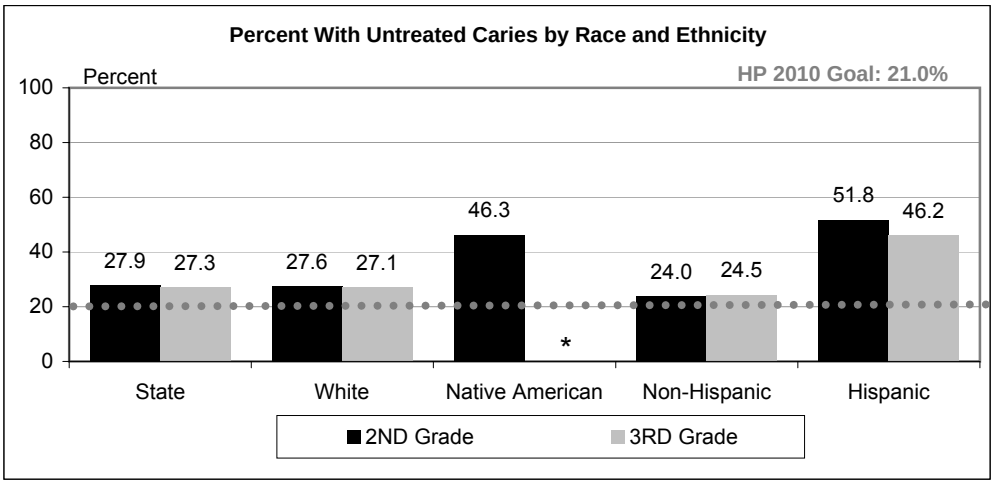
► 42.7 percent of 2nd graders in District 3 had untreated dental caries well above the State average of 27.9 percent and the HP 2010 goal of 21.0 percent for children aged 6-8.

* Figure is unreliable by Smile Survey standards (n<30).

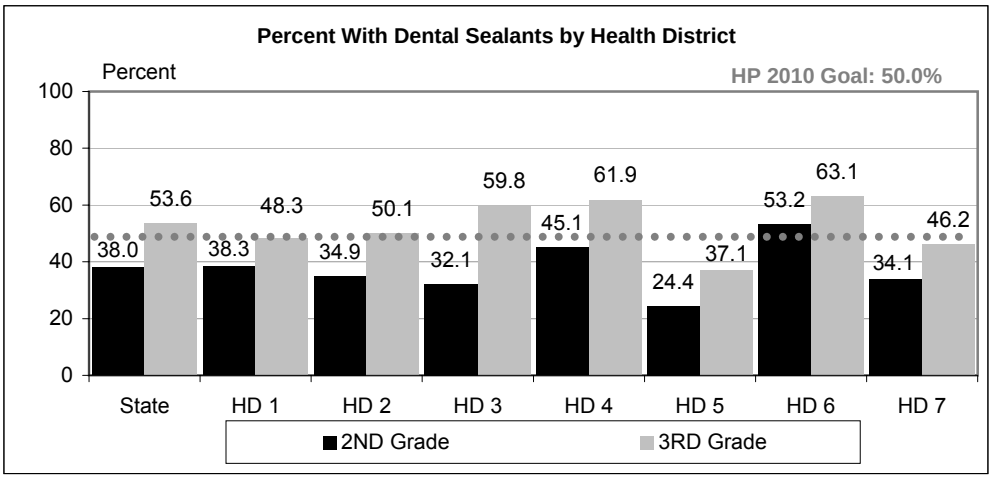
ORAL HEALTH, SECOND AND THIRD GRADERS

Idaho State Smile Survey

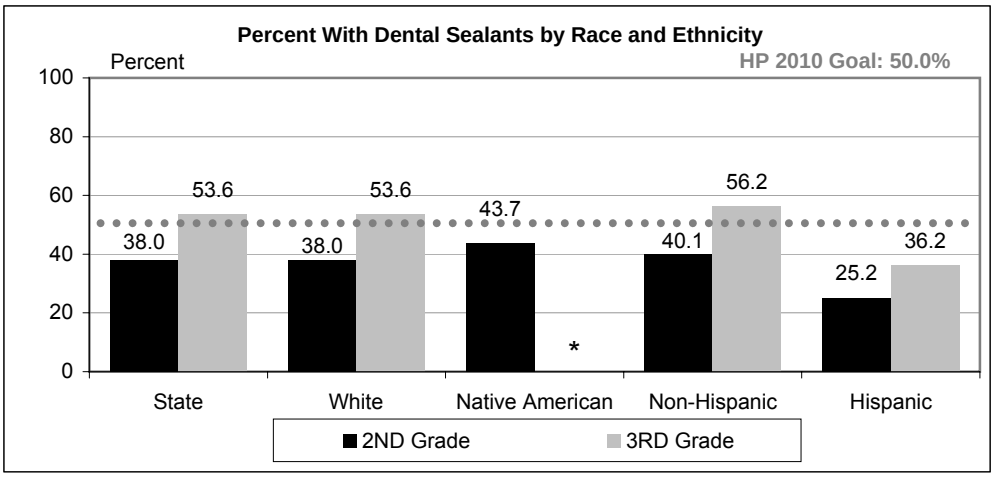
2001



► Hispanic second and third graders had much higher rates of untreated dental caries than their Non-Hispanic classmates and were well above the HP 2010 goal of 21.0 percent for children aged 6-8.



► While the proportion of third graders with dental sealants is above the HP 2010 goal of 50.0 percent, second graders, with 38.0 percent of them having dental sealants, have not yet met the HP 2010 goal for children aged 6-8.

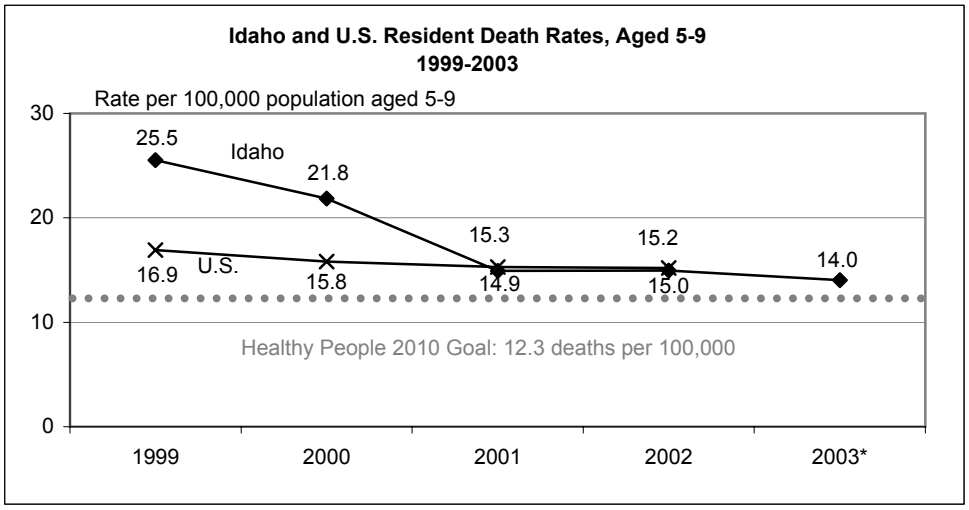


► Hispanic second and third graders had lower rates of dental sealants than their Non-Hispanic classmates and were below the HP 2010 goal of 50.0 percent for children aged 6-8.

* Figure is unreliable by Smile Survey standards (n<30).

CHILD MORTALITY AGED 5-9

Idaho Resident Deaths
1999-2003



► Idaho's child death rate for 5 to 9 year olds decreased 45.0 percent from 1999 to 2003. From 1999-2002*, the U.S. death rate decreased 10.1 percent. The rates for Idaho and U.S. remained above the Healthy People 2010 goal of 12.3.

* U.S. rate in 2003 not available.

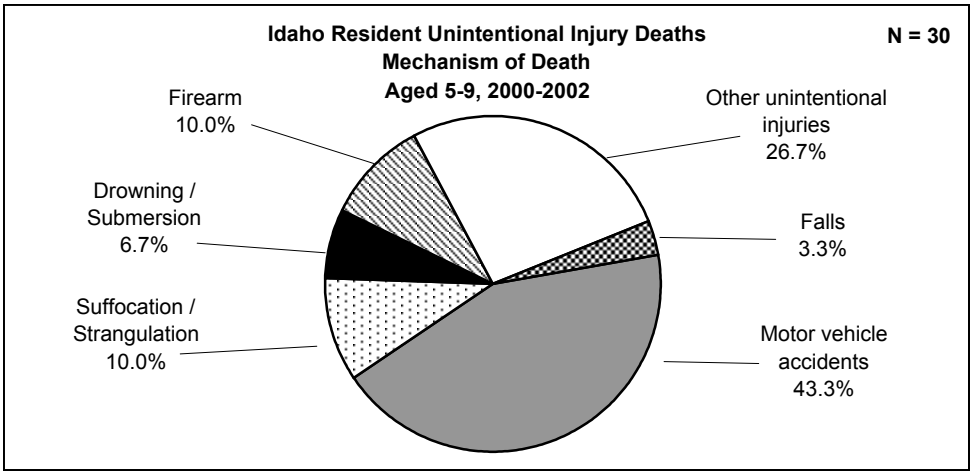
Manner of Death, Idaho and U.S., 2000-2002

	IDAHO		U.S.		Idaho Significantly Higher than the U.S.
	Number	Rate per 100,000	Number	Rate per 100,000	
Total Deaths*	52	17.3	9,364	15.4	
Natural Deaths	21	7.0	4,982	8.2	
Unintentional Injury Deaths	30	10.0	3,850	6.3	Yes
Motor Vehicle Accidents	13	4.3	2,162	3.6	
All other unintentional injury	17	5.6	1,688	2.8	Yes
Intentional Injury Deaths	-	-	435	0.7	
Intentional Self-Harm (Suicide)	-	-	18	-	
Assault (Homicide)	-	-	417	0.7	

* Total includes causes of deaths shown in this table plus deaths of undetermined intent and deaths due to legal intervention, operations of war and their sequelae, and complications of medical and surgical care (not shown).
Dash (-) indicates zero deaths or death rate of less than 0.1 per 100,000.
Note: 2002 is the latest year comparable U.S. data are available by manner of death.

► Idaho's three-year death rate for 5-9 year olds (17.3 per 100,000) was higher than the Healthy People 2010 goal of 12.3 per 100,000.

► Five to nine year olds had a significantly higher rate of unintentional injury deaths in Idaho than in the U.S.



► Motor vehicle accident related injuries were the leading mechanism of unintentional injury deaths among 5-9 year olds.

ADOLESCENTS AGED 10-14

IDAHO RESIDENT POPULATION

Adolescents Aged 10-14

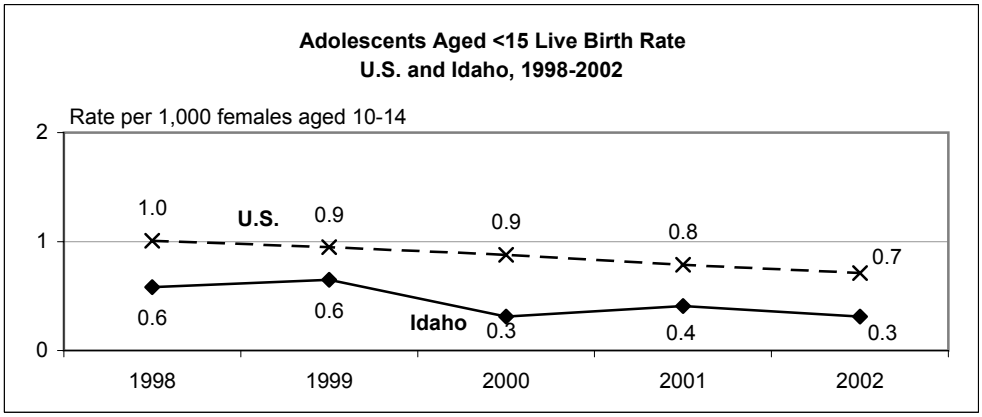
2002

Residence	Total	Sex		Race				Hispanic Ethnicity
		Male	Female	White	Black	American Indian	Asian/Pacific Islander	
Idaho	106,111	54,588	51,523	101,569	1,023	2,174	1,345	12,123
District 1	14,257	7,454	6,803	13,706	76	377	98	490
District 2	6,487	3,295	3,192	6,023	37	370	57	229
District 3	17,188	8,806	8,382	16,612	137	238	201	4,052
District 4	27,122	13,953	13,169	25,727	464	274	657	1,799
District 5	13,471	6,910	6,561	13,113	95	150	113	2,625
District 6	13,511	6,900	6,611	12,673	96	641	101	1,490
District 7	14,075	7,270	6,805	13,715	118	124	118	1,438
Ada	23,878	12,237	11,641	22,674	378	223	603	1,357
Adams	271	142	129	265	-	6	-	8
Bannock	5,606	2,875	2,731	5,202	62	279	63	411
Bear Lake	623	322	301	613	3	7	-	16
Benewah	697	383	314	598	-	97	2	21
Bingham	4,095	2,091	2,004	3,731	23	317	24	689
Blaine	1,420	709	711	1,398	3	7	12	174
Boise	540	272	268	534	2	3	1	28
Bonner	2,998	1,571	1,427	2,922	14	51	11	82
Bonneville	7,562	3,912	3,650	7,312	88	76	86	756
Boundary	814	410	404	783	3	19	9	32
Butte	243	134	109	239	2	2	-	18
Camas	84	46	38	84	-	-	-	3
Canyon	12,056	6,199	5,857	11,627	106	159	164	3,101
Caribou	661	334	327	650	2	2	7	27
Cassia	2,103	1,123	980	2,050	9	36	8	504
Clark	90	45	45	88	1	1	-	47
Clearwater	576	300	276	554	2	16	4	19
Custer	310	158	152	308	-	2	-	34
Elmore	2,176	1,168	1,008	1,997	84	45	50	392
Franklin	1,199	591	608	1,189	1	7	2	81
Fremont	981	513	468	964	4	10	3	137
Gem	1,259	639	620	1,229	10	13	7	153
Gooding	1,161	622	539	1,132	13	14	2	251
Idaho	1,149	542	607	1,075	1	65	8	30
Jefferson	2,010	1,008	1,002	1,973	11	14	12	202
Jerome	1,656	874	782	1,639	4	7	6	380
Kootenai	8,897	4,633	4,264	8,580	58	184	75	327
Latah	1,964	1,006	958	1,868	25	41	30	75
Lemhi	629	312	317	615	4	8	2	32
Lewis	297	161	136	280	1	15	1	14
Lincoln	383	194	189	365	6	11	1	83
Madison	1,880	1,012	868	1,854	6	11	9	113
Minidoka	1,684	845	839	1,642	16	19	7	537
Nez Perce	2,501	1,286	1,215	2,246	8	233	14	91
Oneida	370	188	182	370	-	-	-	10
Owyhee	994	523	471	939	7	40	8	289
Payette	1,824	933	891	1,785	12	14	13	332
Power	714	365	349	679	3	27	5	238
Shoshone	851	457	394	823	1	26	1	28
Teton	613	310	303	601	4	2	6	117
Twin Falls	4,980	2,497	2,483	4,803	44	56	77	693
Valley	528	276	252	522	-	3	3	22
Washington	784	370	414	767	2	6	9	169

July 1, 2002 bridge-race population estimates, U.S. Census Bureau and National Center for Health Statistics, Internet release August 8, 2003.

LIVE BIRTHS TO ADOLESCENTS AGED <15

Idaho Resident Live Births
1998-2002



► While the live birth rate to females aged <15 was significantly lower in Idaho than in the U.S. from 1998-2002, the rate of adolescent live births was higher for some populations, when compared with the entire state.

Ethnicity of Mother					
Ethnicity of Mother	Total Live Births	Live Births to Females Aged <15	2000 Female Population Aged 10-14	Live Birth Rate[1]	Significantly Higher than the Total[2]
Total	101,184	112	51,332	0.4	
Non-Hispanic	87,075	51	46,077	0.2	
Hispanic	12,916	57	5,255	2.2	Yes
Not stated	1,193	4	N/A	N/A	N/A

► The live birth rate for Hispanic females aged <15 (2.2 per 1,000) was significantly higher than the live birth rate for all females aged <15 (0.4 per 1,000).

Mother's Resident District					
Residence	Total Live Births	Live Births to Females Aged <15	2000 Female Population Aged 10-14	Live Birth Rate[1]	Significantly Higher than the Total[2]
Idaho	101,184	112	51,332	0.4	
District 1	11,240	6	6,904	0.2	
District 2	5,750	5	3,303	0.3	
District 3	17,033	36	7,834	0.9	Yes
District 4	27,078	10	12,685	0.2	
District 5	12,853	26	6,690	0.8	Yes
District 6	13,604	21	6,842	0.6	
District 7	13,626	8	7,074	0.2	

► Females aged <15 residing in District 3 (0.9 per 1,000) and District 5 (0.8 per 1,000) were significantly more likely to give birth than females aged <15 throughout the state (0.4 per 1,000).

Percent Medicaid					
Age of Mother	Total Live Births	Medicaid as Payment Source[3]	Payment Source Unknown	Percent Medicaid[4]	Significantly Higher than the Total[2]
All Ages	101,184	28,280	5,047	29.4	
<15	112	50	4	46.3	Yes
15-17	3,433	1,872	168	57.3	Yes
18-19	8,038	4,930	334	64.0	Yes
20+	89,590	21,427	4,537	25.2	
Unknown	11	1	4	N/A	N/A

► The percent of live births with Medicaid selected as the payment source for delivery was significantly higher for adolescent mothers than for mothers of all ages.

1. Live Birth Rate: The number of live births to females aged <15 per 1,000 females aged 10-14.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
3. Payment source for delivery may change after the birth certificate is filed with the State of Idaho. Medicaid status data from the birth certificate may not match Medicaid data.
4. Percents based on records with known payment source.

ADOLESCENT MORTALITY AGED 10-14

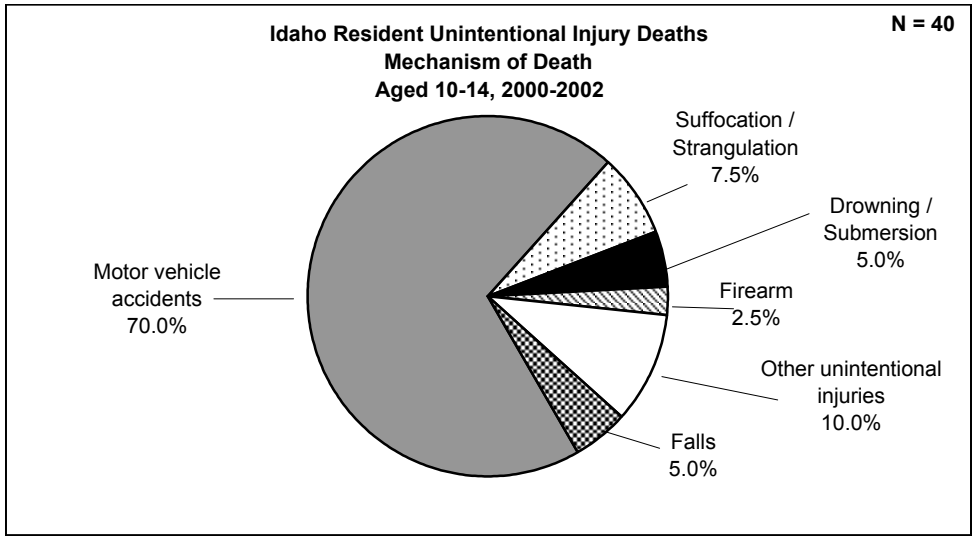
Idaho Resident Deaths
2000-2002

Manner of Death, Idaho and U.S. 2000-2002					
	IDAHO		U.S.		Idaho Significantly Higher than the U.S.
	Number	Rate per 100,000	Number	Rate per 100,000	
Total Deaths*	73	23.0	12,294	19.7	
Natural Deaths	21	6.6	5,975	9.6	
Unintentional Injury Deaths	40	12.6	4,683	7.5	Yes
Motor Vehicle Accidents	28	8.8	2,910	4.7	Yes
All other unintentional injury	12	3.8	1,773	2.8	
Intentional Injury Deaths	9	2.8	1,474	2.4	**
Intentional Self-Harm (Suicide)	8	2.5	832	1.3	**
Assault (Homicide)	1	0.3	636	1.0	

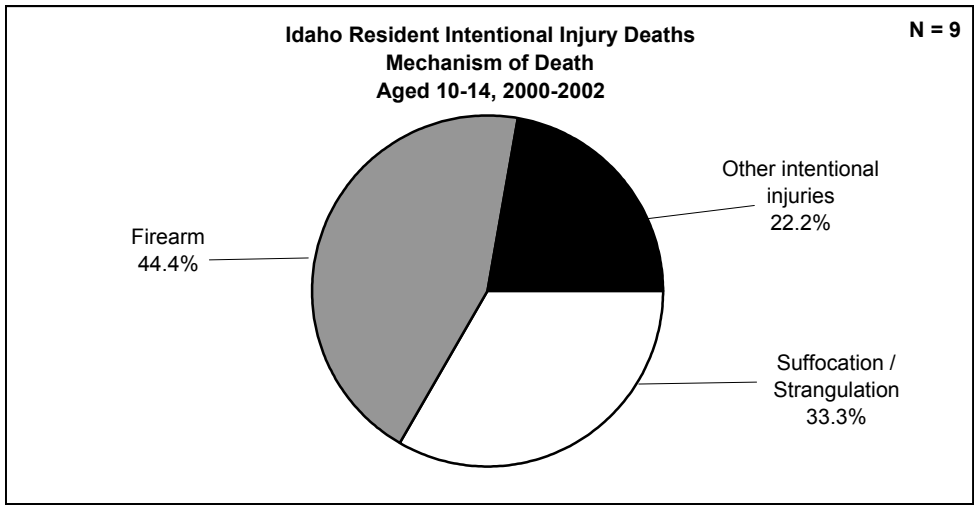
* Total includes causes of deaths shown in this table plus deaths of undetermined intent and deaths due to legal intervention, operations of war and their sequelae, and complications of medical and surgical care (not shown).

** Does not meet minimum requirement to test for significance.

► Ten to fourteen year olds had a significantly higher rate of death due to unintentional injury in Idaho (12.6 deaths per 100,000) than in the U.S. (7.5 deaths per 100,000).



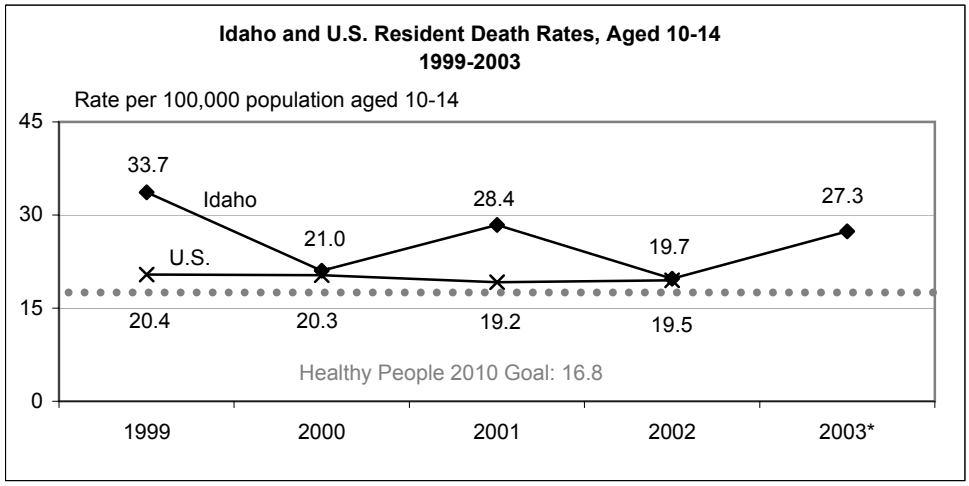
► Motor vehicle accident-related injury was the leading mechanism of unintentional injury deaths among 10-14 year olds.



► Firearm-related injury was the leading mechanism of intentional injury deaths among 10-14 year olds.

ADOLESCENT MORTALITY AGED 10-14

Idaho Resident Deaths
1999-2003



* U.S. rate in 2003 not available.

► Idaho's adolescent death rate for 10 to 14 year olds fluctuated between 1999 to 2003. During the five-year period, Idaho's rates remained higher than U.S. rates. However, there was an 18.7 percent decline in the Idaho rate from 33.7 per 100,000 in 1999 to 27.3 per 100,000 in 2003. From 1999-2002*, the U.S. death rate decreased 4.4 percent. The HP2010 goal is to lower the adolescent death rate to 16.8 deaths per 100,000 aged 10-14.

TEENS AGED 15-17

IDAHO RESIDENT POPULATION

Teens Aged 15-17

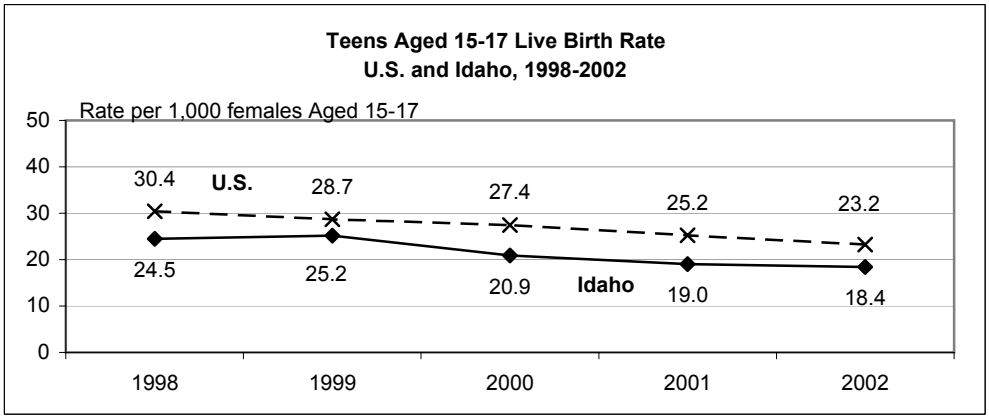
2002

Residence	Total	Sex		Race				Hispanic Ethnicity
		Male	Female	White	Black	American Indian	Asian/Pacific Islander	
Idaho	64,825	33,264	31,561	62,201	461	1,283	880	6,460
District 1	8,735	4,493	4,242	8,447	27	200	61	277
District 2	4,043	2,029	2,014	3,778	19	205	41	101
District 3	9,975	5,106	4,869	9,620	63	169	123	2,088
District 4	16,094	8,279	7,815	15,286	219	165	424	957
District 5	8,392	4,307	4,085	8,173	38	104	77	1,470
District 6	8,562	4,393	4,169	8,096	41	351	74	795
District 7	9,024	4,657	4,367	8,801	54	89	80	772
Ada	14,030	7,184	6,846	13,328	175	144	383	725
Adams	182	102	80	177	-	5	-	4
Bannock	3,466	1,811	1,655	3,264	25	138	39	211
Bear Lake	418	207	211	410	-	5	3	11
Benewah	410	207	203	360	-	45	5	10
Bingham	2,664	1,347	1,317	2,435	11	195	23	385
Blaine	859	446	413	835	5	6	13	110
Boise	375	214	161	370	1	4	-	10
Bonner	1,900	972	928	1,855	9	30	6	54
Bonneville	4,697	2,387	2,310	4,544	40	60	53	387
Boundary	574	303	271	548	1	20	5	28
Butte	141	76	65	136	4	1	-	6
Camas	62	34	28	61	1	-	-	5
Canyon	6,827	3,438	3,389	6,564	54	109	100	1,598
Caribou	425	196	229	423	-	-	2	14
Cassia	1,241	649	592	1,216	2	18	5	270
Clark	49	24	25	48	-	1	-	24
Clearwater	400	200	200	386	1	11	2	6
Custer	222	107	115	222	-	-	-	13
Elmore	1,272	652	620	1,178	42	14	38	218
Franklin	710	381	329	704	1	-	5	39
Fremont	781	418	363	765	4	8	4	101
Gem	774	395	379	757	5	8	4	66
Gooding	697	352	345	683	2	11	1	138
Idaho	772	396	376	733	1	30	8	18
Jefferson	1,289	666	623	1,266	3	12	8	121
Jerome	991	500	491	975	1	9	6	201
Kootenai	5,291	2,720	2,571	5,138	15	95	43	166
Latah	1,153	542	611	1,100	8	26	19	30
Lemhi	380	190	190	375	2	2	1	15
Lewis	180	97	83	171	-	5	4	1
Lincoln	227	117	110	219	1	7	-	40
Madison	1,222	656	566	1,201	3	4	14	55
Minidoka	1,084	559	525	1,048	7	23	6	305
Nez Perce	1,538	794	744	1,388	9	133	8	46
Oneida	278	151	127	278	-	-	-	7
Owyhee	579	313	266	552	-	25	2	157
Payette	1,132	613	519	1,103	3	15	11	168
Power	460	224	236	446	-	12	2	122
Shoshone	560	291	269	546	2	10	2	19
Teton	384	209	175	380	2	2	-	56
Twin Falls	3,231	1,650	1,581	3,136	19	30	46	401
Valley	417	229	188	410	1	3	3	4
Washington	481	245	236	467	1	7	6	95

July 1, 2002 bridge-race population estimates, U.S. Census Bureau and National Center for Health Statistics, Internet release August 8, 2003.

LIVE BIRTHS TO TEENS AGED 15-17

Idaho Resident Live Births
1998-2002



► While Idaho's rate of live births to females aged 15-17 decreased significantly from 24.5 per 1,000 females aged 15-17 in 1998 to 18.4 per 1,000 females aged 15-17 in 2002, the rate of teen live births was higher for some populations, when compared with the entire state.

Race of Mother					
Race of Mother	Total Live Births	Live Births to Females Aged 15-17	2000 Female Population Aged 15-17	Live Birth Rate[1]	Significantly Higher than the Total[2]
Total	101,184	3,433	31,977	21.5	
White	96,786	3,224	30,754	21.0	
Black	412	22	194	22.7	
American Indian	1,616	120	613	39.2	Yes
Asian/Pacific Islander	1,419	28	416	13.5	
Other race	25	1	N/A	N/A	N/A
Not stated	926	38	N/A	N/A	N/A

► The live birth rate for teens aged 15-17 was significantly higher for American Indians (39.2 per 1,000 American Indian females aged 15-17) than for all races (21.5 per 1,000 females aged 15-17).

Ethnicity of Mother					
Ethnicity of Mother	Total Live Births	Live Births to Females Aged 15-17	2000 Female Population Aged 15-17	Live Birth Rate[1]	Significantly Higher than the Total[2]
Total	101,184	3,433	31,977	21.5	
Non-Hispanic	87,075	2,402	28,993	16.6	
Hispanic	12,916	1,003	2,984	67.2	Yes
Not stated	1,193	28	N/A	N/A	N/A

► The rate of live births to teens aged 15-17 was significantly higher for Hispanics (67.2 per 1,000 Hispanic females aged 15-17) than for all races (21.5 per 1,000 females aged 15-17).

Percent Medicaid					
Age of Mother	Total Live Births	Medicaid as Payment Source[3]	Payment Source Unknown	Percent Medicaid[4]	Significantly Higher than the Total[2]
All Ages	101,184	28,280	5,047	29.4	
<15	112	50	4	46.3	Yes
15-17	3,433	1,872	168	57.3	Yes
18-19	8,038	4,930	334	64.0	Yes
20+	89,590	21,427	4,537	25.2	
Unknown	11	1	4	N/A	N/A

► The percent of live births with Medicaid selected as the payment source for delivery was significantly higher for teen mothers than for mothers of all ages.

1. Live birth rate: The number of live births to females aged 15-17 per 1,000 females aged 15-17.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.
3. Payment source for delivery may change after the birth certificate is filed with the State of Idaho. Medicaid status data from the birth certificate may not match Medicaid data.
4. Percents based on records with known payment source.

LIVE BIRTHS TO TEENS AGED 15-17

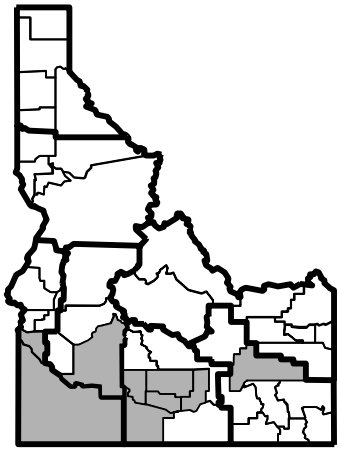
Idaho Resident Live Births

1998-2002

Mother's Resident County					
Residence	Total Live Births	Live Births to Females Aged 15-17	2000 female population aged 15-17	Live Birth Rate[1]	Significantly Higher than the Total[2]
Idaho	101,184	3,433	31,977	21.5	
District 1	11,240	391	4,193	18.7	
Benewah	572	19	220	17.3	
Bonner	1,891	86	884	19.5	
Boundary	637	27	276	19.6	
Kootenai	7,413	227	2,527	18.0	
Shoshone	727	32	286	22.4	
District 2	5,750	144	2,136	13.5	
Clearwater	381	15	224	13.4	
Idaho	771	28	412	13.6	
Latah	2,131	18	645	5.6	
Lewis	202	9	101	17.8	
Nez Perce	2,265	74	754	19.6	
District 3	17,033	796	4,678	34.0	Yes
Adams	122	6	83	14.5	
Canyon	12,809	603	3,164	38.1	Yes
Gem	985	37	371	19.9	
Owyhee	899	57	286	39.9	Yes
Payette	1,522	64	520	24.6	
Washington	696	29	254	22.8	
District 4	27,078	645	7,715	16.7	
Ada	23,843	521	6,702	15.5	
Boise	344	10	185	10.8	
Elmore	2,559	98	615	31.9	Yes
Valley	332	16	213	15.0	
District 5	12,853	604	4,249	28.4	Yes
Blaine	1,241	30	354	16.9	
Camas	51	-	25	-	
Cassia	1,928	77	649	23.7	
Gooding	1,118	73	382	38.2	Yes
Jerome	1,625	83	516	32.2	Yes
Lincoln	326	18	96	37.5	Yes
Minidoka	1,762	117	608	38.5	Yes
Twin Falls	4,802	206	1,619	25.4	Yes
District 6	13,604	452	4,545	19.9	
Bannock	6,863	198	1,858	21.3	
Bear Lake	420	11	242	9.1	
Bingham	3,710	172	1,377	25.0	Yes
Butte	186	-	72	-	
Caribou	520	15	237	12.7	
Franklin	1,070	26	374	13.9	
Oneida	288	9	144	12.5	
Power	547	21	241	17.4	
District 7	13,626	401	4,461	18.0	
Bonneville	7,164	236	2,346	20.1	
Clark	87	1	30	6.7	
Custer	183	4	104	7.7	
Fremont	1,005	41	395	20.8	
Jefferson	1,748	55	636	17.3	
Lemhi	343	9	199	9.0	
Madison	2,493	45	614	14.7	
Teton	603	10	137	14.6	

► District 3 (34.0 per 1,000 females aged 15-17) and District 5 (28.4 per 1,000 females aged 15-17) had significantly higher rates of live births to teens aged 15-17 than the state (21.5 per 1,000 females aged 15-17).

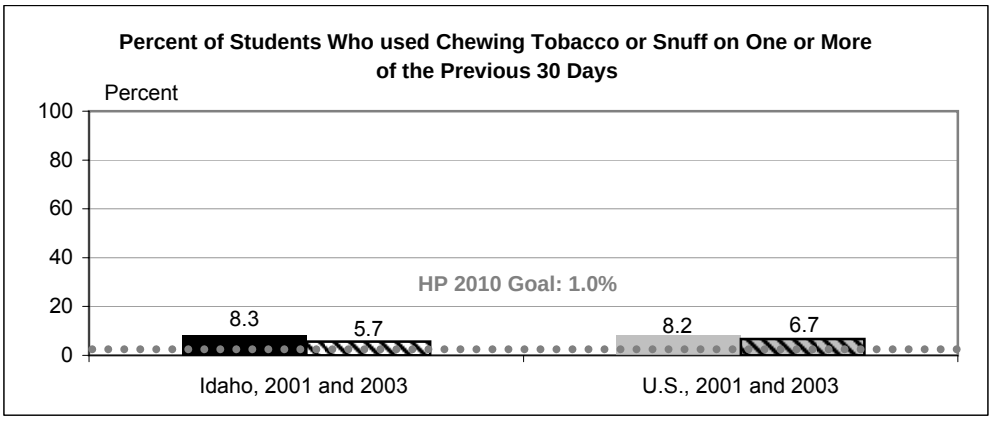
► The live birth rate to teens aged 15-17 ranged from a high of 39.9 per 1,000 females aged 15-17 in Owyhee County to a low of 0.0 per 1,000 females aged 15-17 in Butte and Camas Counties.



1. Live Birth Rate: The number of live births to females aged 15-17 per 1,000 females aged 15-17.
2. Significance is determined at the 95% confidence level. See Technical Notes for more information on the methods used in determining statistical significance.

TOBACCO, GRADES 9-12

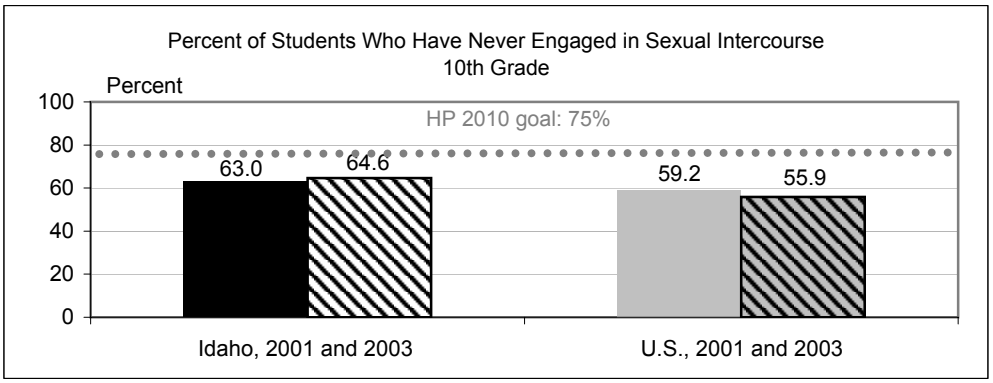
Idaho Youth Risk Behavior Survey
2001 and 2003



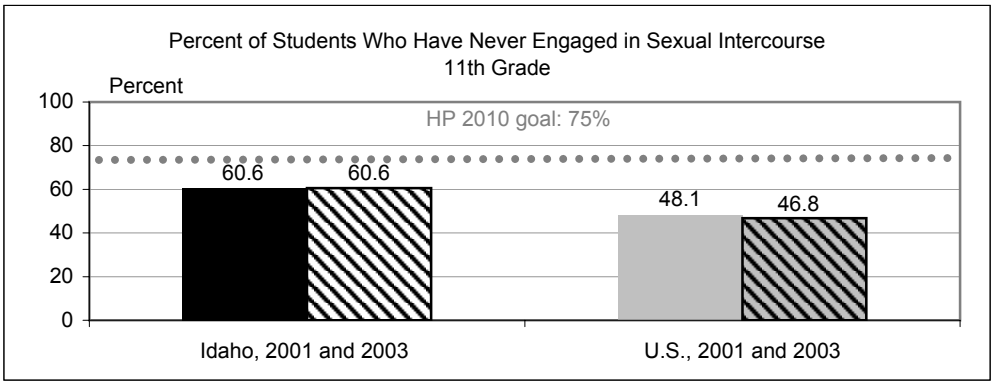
► The HP 2010 goal for percent of students who used chewing tobacco or snuff on one or more of the previous days is 1.0 percent, Idaho has not yet met the goal with a rate of 5.7 percent.

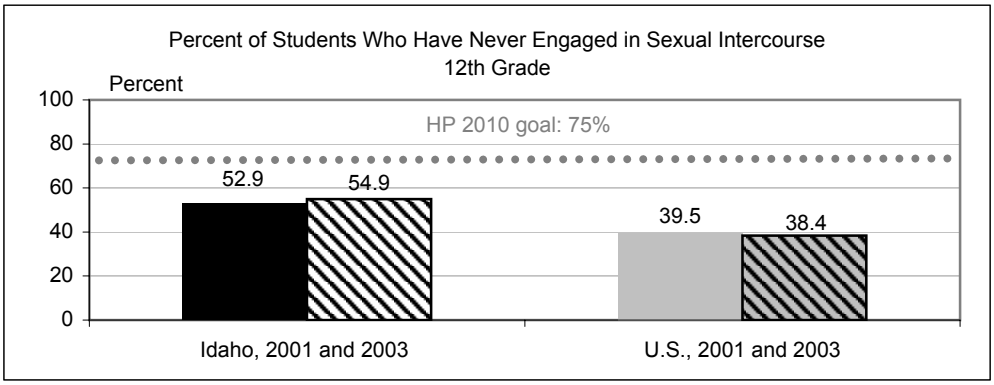
SEXUAL BEHAVIOR

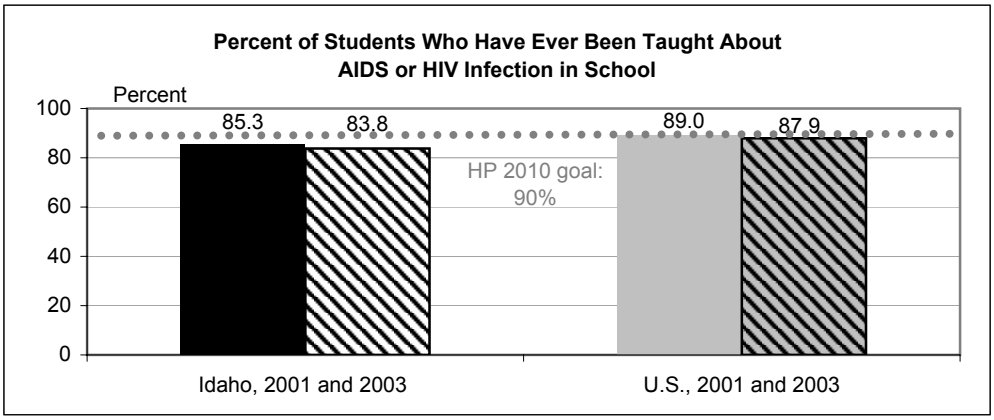
Idaho Youth Risk Behavior Survey
2001 and 2003



► The HP 2010 goal is 75 percent abstinence among youths aged 15-17. Data available for this measure are based on YRBS data by grade (majority of 15 year olds are in 10th grade; 16 year olds are in the 11th grade and 17 year olds are in the 12th grade).



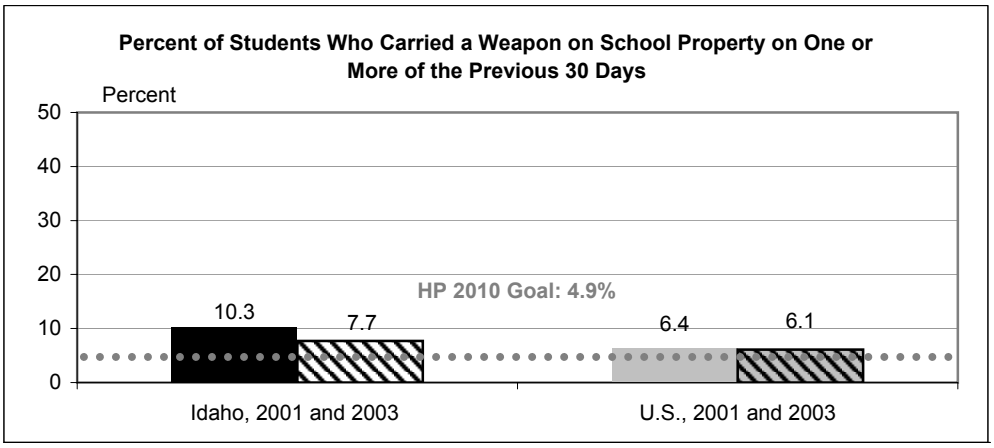




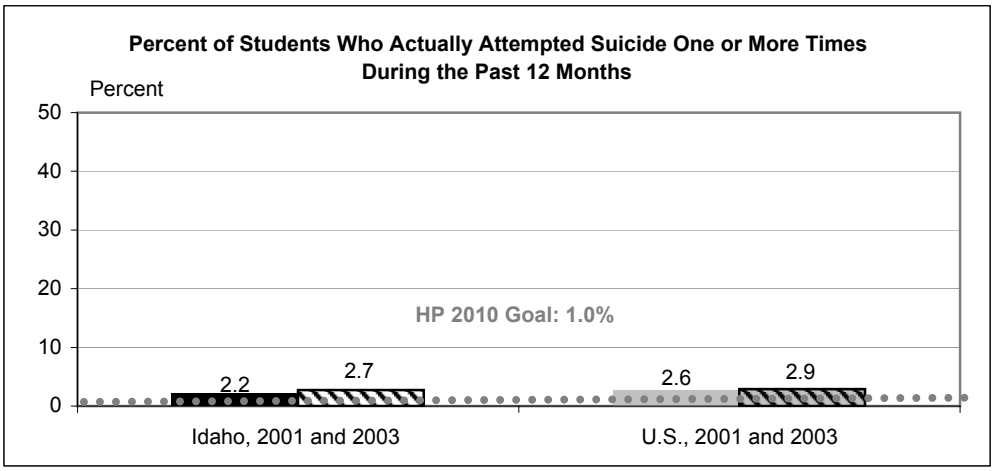
► HP 2010 goal is for 90.0 percent of young adults to receive HIV and AIDS education prior to turning age 18. Idaho and U.S. data are based on the YRBS which includes students in graded 9-12.

UNINTENTIONAL AND INTENTIONAL INJURIES GRADES 9-12

Idaho Youth Risk Behavior Survey
2001 and 2003



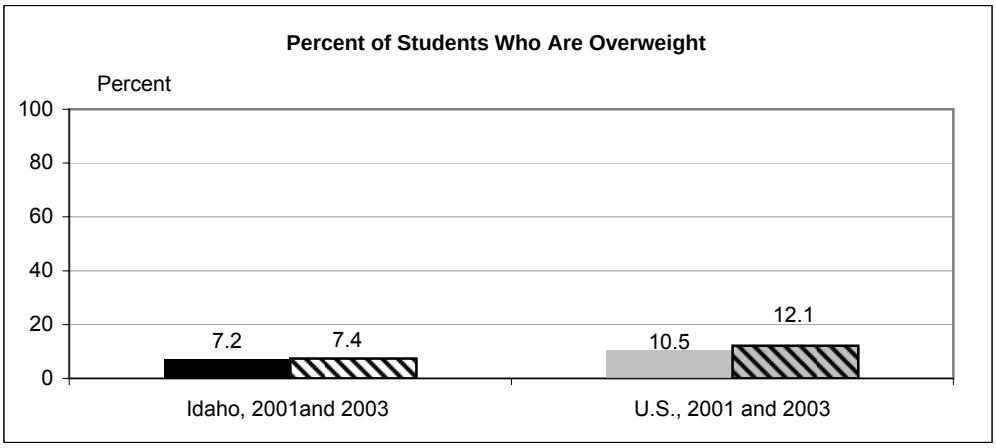
► 7.7 percent of 9-12 graders reported carrying a weapon on school property one or more times during the previous month in Idaho, a rate higher than the U.S. rate (6.1 percent) and the HP 2010 goal of 4.9 percent for 9-12 graders.



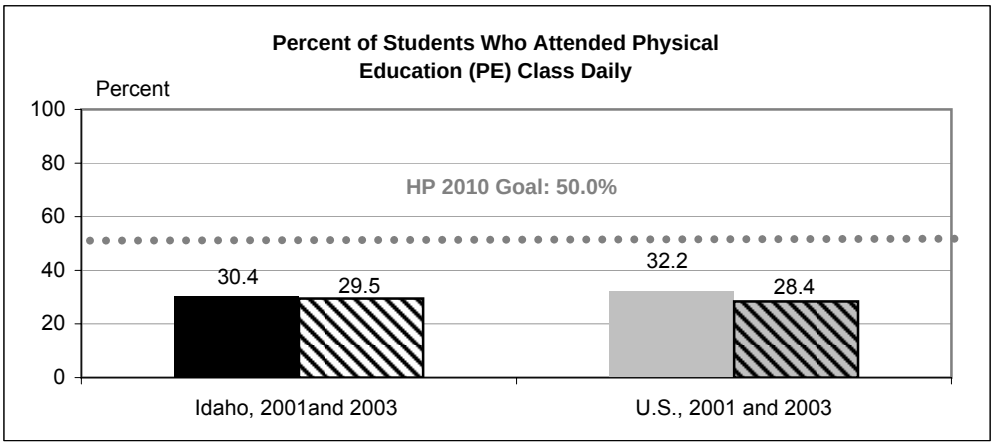
► Idaho's suicide attempt rate for 9-12 graders (2.7 in 2003), while lower than the U.S. rate (2.9 percent), was higher than the HP 2010 goal of 1.0 percent. The goal and Idaho and U.S. measures are based on suicide attempts in the past 12 months that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse.

DIETARY/HEALTH BEHAVIOR GRADES 9-12

Idaho Youth Risk Behavior Survey
2001 and 2003



► A total of 7.4 percent of Idaho students were overweight in 2003, which was slightly higher than the rate in 2001.

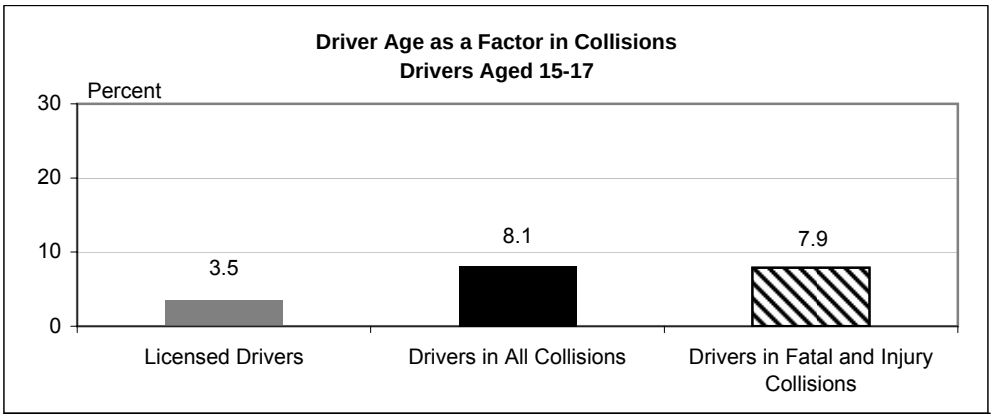


► 29.5 percent of Idaho 9-12 graders attended physical education class daily, lagging behind the HP 2010 goal of 50.0 percent.

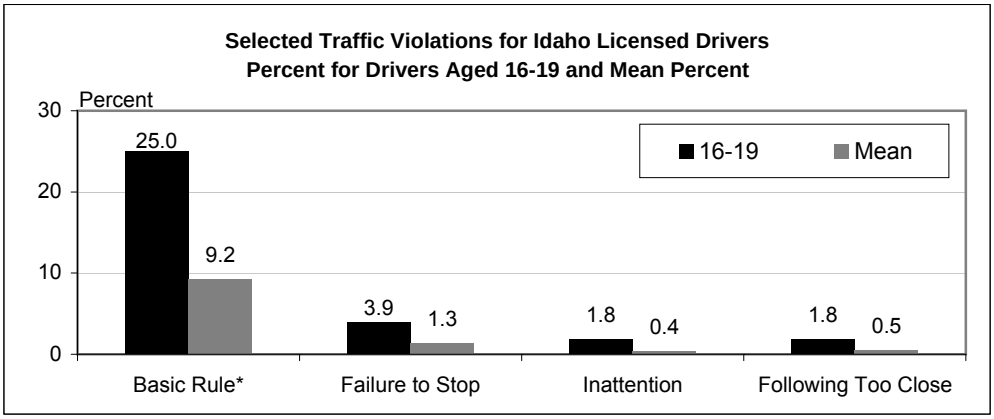
IDAHO TRAFFIC VIOLATIONS AND COLLISIONS

Idaho Transportation Department, Office of Highway Safety

2002



► While accounting for only 3.5 percent of all drivers, teens aged 15-17 accounted for 8.1 percent of drivers in all collisions and 7.9 percent of drivers in fatal and injury collisions.

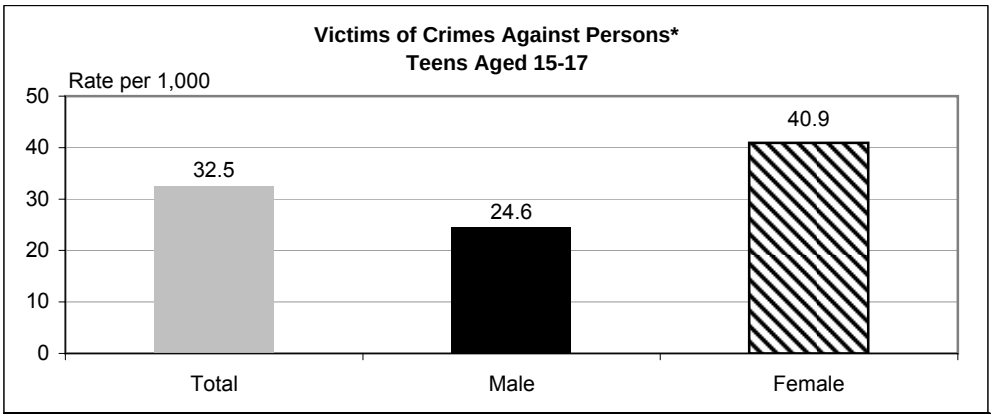


► Drivers aged 16-19 had violation rates well above the mean in areas shown to be major contributing factors to collisions.

*Basic rule violations refer to Idaho Code requiring drivers to operate vehicles in a reasonable, prudent speed for the conditions and with consideration for actual and potential hazards.

CRIMES AGAINST PERSONS

Crime in Idaho
2003

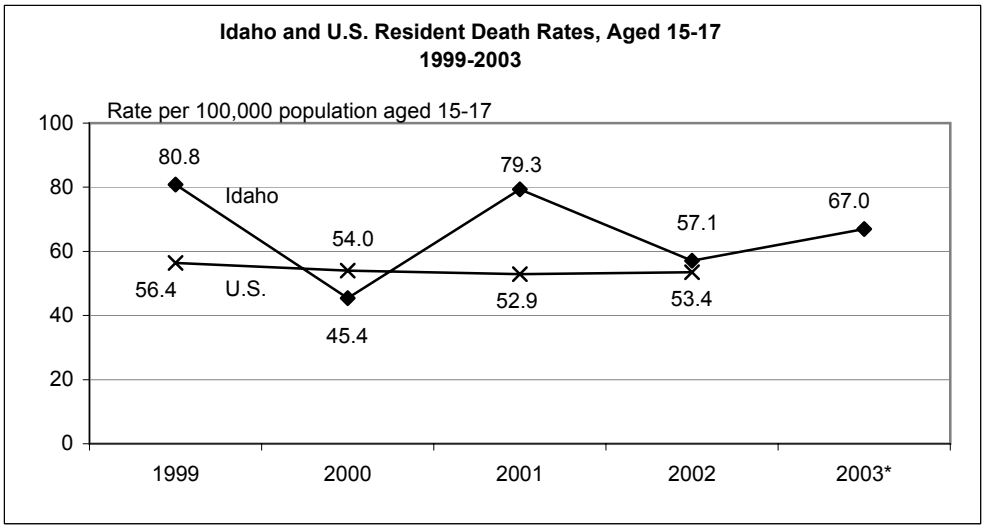


► Females aged 15-17 were significantly more likely than males aged 15-17 to be the victim of crimes against persons in Idaho in 2003.*

* Crimes against persons include: Murder, Manslaughter, Forcible Rape, Forcible Sodomy, Sexual Assault with an Object, Forcible Fondling, Kidnapping, Aggravated Assault, Simple Assault, Intimidation, Incest, and Statutory Rape.

TEEN MORTALITY AGED 15-17

Idaho Resident Deaths
1999-2003



► The Idaho teen death rate for 15-17 year olds followed an up-and-down pattern from 1999 to 2003 and was higher than the U.S. rate in all but one year. The HP2010 goal is for teens aged 15 to 19 and is not comparable with data for 15 to 17 year olds.

* U.S. rate in 2003 not available.

Manner of Death, Idaho and U.S. 2000-2002					
	IDAHO		U.S.		Idaho Significantly Higher than the U.S.
	Number	Rate per 100,000	Number	Rate per 100,000	
Total Deaths*	119	60.5	19,448	53.5	Yes
Natural Deaths	18	9.2	5,066	13.9	
Unintentional Injury Deaths	74	37.6	9,767	26.8	Yes
Motor Vehicle Accidents	60	30.5	7,701	21.2	Yes
All other unintentional injury	14	7.1	2,066	5.7	
Intentional Injury Deaths**	27	13.7	4,470	12.3	
Intentional Self-Harm (Suicide)	24	12.2	2,240	6.2	Yes
Assault (Homicide)	3	1.5	2,208	6.1	

► Fifteen to seventeen year olds had significantly higher unintentional injury, motor vehicle accident, and suicide death rates in Idaho than in the U.S.

* Total includes deaths of undetermined intent and deaths due to legal intervention, operations of war and their sequelae, and complications of medical and surgical care.

** Total for U.S. intentional injury deaths includes deaths due to legal intervention (not shown).

Intentional Self-Harm (Suicide), 2000-2002			
	Number	Rate per 100,000	Significantly Higher that the Total
Total Suicide Deaths	24	12.2	
Male	22	21.7	Yes
Female	2	2.1	

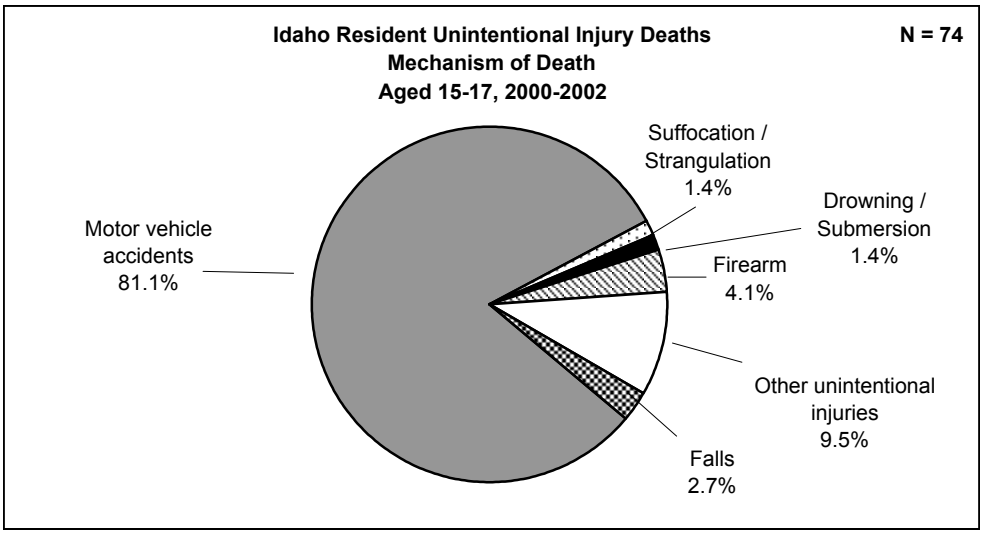
► Males aged 15-17 were significantly more likely to commit suicide than females.

Firearm Deaths, 2000-2002			
	Number	Rate per 100,000	Significantly Higher that the Total
Total Firearm Deaths	21	10.7	
Male	20	19.7	Yes
Female	1	1.1	

► Firearm deaths were significantly more likely among males aged 15-17 than females in the age group.

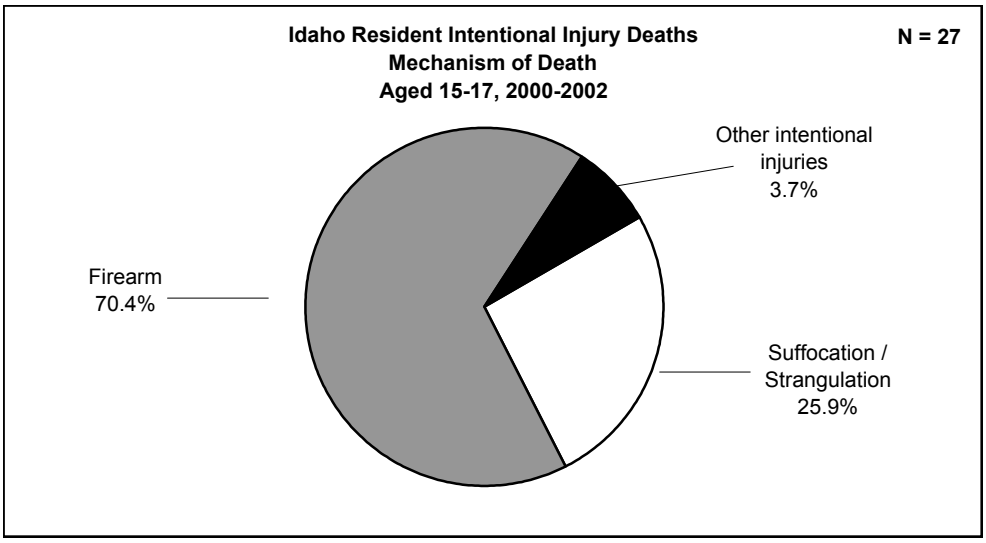
TEEN MORTALITY AGED 15-17

Idaho Resident Deaths
2000-2002



Note: Percents do not sum to 100 due to rounding.

► Motor vehicle accident related injury was the leading mechanism of unintentional injury deaths among 15-17 year olds.



► Firearm-related injury was the leading mechanism of intentional injury deaths among 15-17 year olds.

APPENDICES

APPENDIX A

Indicators Not Meeting the Criterion for Inclusion

For inclusion in the report, each indicator had to meet one or more of the following criteria:

- Not meeting Healthy People 2010 goals for the specific indicator
- Significant disparities between Idaho and the U.S. for the specific indicator*
- Significant state level changes (negative) in the indicator over the past five years*
- Significant disparities between different populations in Idaho with regard to the specific indicator*

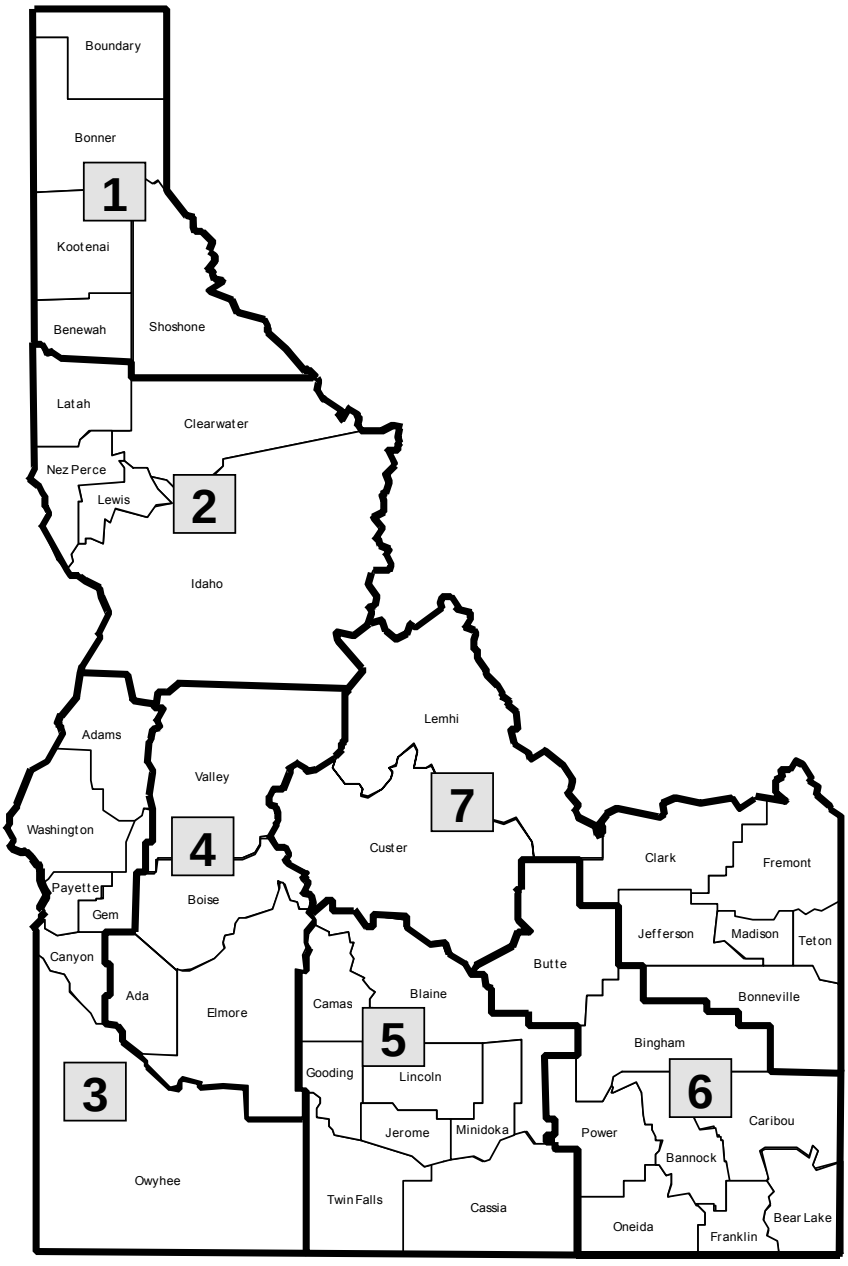
*Significance is determined at the 95% confidence level. See technical notes for more information on the methods used in determining statistical significance.

The following child health indicators were examined and not included in this report because they did not meet one or more of the criteria listed above, either because Idaho was better than the U.S. and the applicable Healthy People 2010 goal for the specific indicator, or because data were not sufficient to determine if the indicator met the criterion.

- Baby Bottle Tooth Decay
- Bike Helmet Use
- Child Safety Seat Use
- Cigarette Use
- Drinking and Driving
- Drug and Alcohol Use
- Emergency Medical Services Calls
- Exposure to Environmental Tobacco Smoke
- Immunization 4:3:1 series
- Loaded and/or Unlocked Firearms in the Home
- Physical Fighting at School
- Seat Belt Use

APPENDIX B

Counties Comprising Idaho Public Health Districts



District 1	District 2	District 3	District 4	District 5	District 6	District 7
Benewah Bonner Boundary Kootenai Shoshone	Clearwater Idaho Latah Lewis Nez Perce	Adams Canyon Gem Owyhee Payette Washington	Ada Boise Elmore Valley	Blaine Camas Cassia Gooding Jerome Lincoln Minidoka Twin Falls	Bannock Bear Lake Bingham Butte Caribou Franklin Oneida Power	Bonneville Clark Custer Fremont Jefferson Lemhi Madison Teton

Appendix C

Select Healthy People Objectives, HP2010 Goals, and Idaho Resident Data 2000, 2001, 2002, and 2003
Focus Area 9 - Family Planning
and Focus Area 16 - Maternal, Infant, and Child Health

BACKGROUND: Healthy People 2010 (HP2010) is a set of public health objectives for the nation to achieve over the first decade of the new century. There are 467 objectives for 28 focus areas as well as a set of Leading Health Indicators (various selected HP2010 objectives). The Bureau of Health Policy and Vital Statistics has compiled state and county-level statistics (when available) to assist in tracking state and local progress in meeting some of these objectives.

	IDAHO DATA				**HP2010**
	2000	2001	2002	2003	**Goal**
Objective 9-9 Percent of adolescents aged 15-17 who have never engaged in sexual intercourse Note: Idaho data are from the YRBS and are based on students in grades 9-12; majority of students in grade 10 are aged 15, majority of students in grade 11 are aged 16, and majority of students in grade 12 are aged 17.	Grade 10 Grade 11 Grade 12	63.0 60.6 52.9		64.6 60.6 54.9	**75.0**
Objective 9-11 Percent of young adults who have received formal instruction before turning age 18 years on reproductive health issues, including all of the following topics: birth control methods, safer sex to prevent HIV, prevention of sexually transmitted diseases Note: Idaho data are based on youths in grades 9-12 who have ever been taught about AIDS or HIV infection in school.		85.3		83.8	**90.0**
Objective 16-01a Non-induced fetal death rate* (20+ weeks gestation) (per 1,000 live births and non-induced fetal deaths of 20+ weeks gestation)	5.7	5.9	4.6	4.9	**4.1**
Objective 16-01c Infant death rate (under 1 year of age) (per 1,000 live births)	7.5	6.2	6.1	6.3	**4.5**
Objective 16-01d Neonatal death rate (0-27 days of age) (per 1,000 live births)	5.4	4.1	4.0	3.8	**2.9**
Objective 16-01e Postneonatal death rate (28-364 days of age) (per 1,000 live births)	2.1	2.2	2.1	2.6	**1.2**
Objective 16-01f Infant death rate for birth defects (per 1,000 live births)	2.4	1.8	1.9	1.6	**1.1**
Objective 16-01g Infant death rate for congenital heart defects (per 1,000 live births)	0.9	0.6	0.5	0.1	**0.4**
Objective 16-01h Infant death rate for sudden infant death syndrome (SIDS) (per 1,000 live births)	0.6	0.8	0.6	0.9	**0.3**
Objective 16-02a Child death rate for ages 1-4 (per 100,000 children ages 1-4)	24.1	34.2	35.1	36.8	**18.6**

YRBS: Youth Risk Behavior Survey

Appendix C

Select Healthy People Objectives, HP2010 Goals, and Idaho Resident Data 2000, 2001, 2002, and 2003

Focus Area 16 - Maternal, Infant, and Child Health

	IDAHO DATA				HP2010
	2000	2001	2002	2003	Goal
Objective 16-02b Child death rate for ages 5-9 (per 100,000 children ages 5-9)	21.7	15.0	15.1	14.0	**12.3**
Objective 16-03a Adolescent death rate for ages 10-14 (per 100,000 children ages 10-14)	20.9	28.4	19.8	27.3	**16.8**
Objective 16-03b Adolescent death rate for ages 15-19 (per 100,000 children ages 15-19) Note: The age category is 15-17 in the main portion of the Child Health report; data shown here are for 15-19 and are comparable with the HP 2010 goal.	61.3	87.5	73.9	71.6	**39.8**
Objective 16-06a Percent of births to mothers beginning prenatal care in the first trimester	80.9	81.9	82.1	81.3	**90.0**
Objective 16-06b Percent of live births to mothers who received early and adequate prenatal care	73.6	74.6	75.6	76.8	**90.0**
Objective 16-10a Percent of infants born at low birth weight (less than 2500 grams)	6.7	6.4	6.2	6.5	**5.0**
Objective 16-10b Percent of infants born at very low birth weight (less than 1500 grams)	1.1	1.0	1.0	1.0	**0.9**
Objective 16-11a Percent of preterm live births (Less than 37 weeks gestation)	10.2	10.2	10.4	10.6	**7.6**
Objective 16-11b Percent of live births at 32 to 36 weeks of gestation	8.9	8.9	8.9	9.1	**6.4**
Objective 16-11c Percent of live births at less than 32 weeks of gestation	1.3	1.3	1.4	1.4	**1.1**
Objective 16-17c Percent of live births to mothers who did not smoke during pregnancy	87.4	89.9	89.5	88.8	**99.0**
Objective 16-19a Proportion of mothers who breast-feed their babies in early postpartum period Note: Idaho data are for mothers aged 18 and older who ever breast-fed.		89.2			**75.0**
Objective 16-19b Proportion of mothers who breast-feed their babies at 6 months Note: Idaho data are for mothers aged 18 and older whose child was at least 6 months old.		45.4			**50.0**

Appendix C

Select Healthy People Objectives, HP2010 Goals, and Idaho Resident Data 2000, 2001, 2002, and 2003
Focus Area 14 - Immunization and Infectious Diseases
Focus Area 15 - Injury and Violence Prevention
Focus Area 18 - Mental Health and Mental Disorders
Focus Area 21 - Oral Health
Focus Area 22 - Physical Activity and Fitness
and Focus Area 27 - Tobacco Use

	IDAHO DATA				HP2010
	2000	2001	2002	2003	**Goal**
Objective 14-22a Percent of young children aged 19 to 35 months who receive the recommended 4 doses diphtheria-tetanus-acellular pertussis (4DTaP) vaccine.	77.5	76.4	78.5	85.8	**90.0**
Objective 14-22c Percent of young children aged 19 to 35 months who receive the recommended 3 doses hepatitis B (hep B) vaccine.	89.0	86.4	89.5	89.3	**90.0**
Objective 14-22f Percent of young children aged 19 to 35 months who receive the recommended 1 dose varicella vaccine.	38.0	55.8	65.9	72.8	**90.0**
Objective 14-24a Percent of young children aged 19 to 35 months who receive the recommended vaccines (4DTaP, 3 Polio, 1MMR, 3 Hib, 3 hep B)	70.7	70.2	69.4	78.1	**80.0**
Objective 15-39 Percent of students in grades 9-12 who carried a weapon on school property in the past 30 days		10.3		7.7	**4.9**
Objective 18-2 Percent of students in grades 9-12 who attempted suicide in the past 12 months resulting in an injury, poisoning, or overdose that had to be treated by a doctor or nurse		2.2		2.7	**1.0**
Objective 21-1b Percent of children aged 6-8 with dental caries in their primary and permanent teeth Note: Idaho data are based on students in 2nd and 3rd grade; data are not 100 percent comparable with HP2010 goal.	Grade 2 Grade 3	64.1 65.9			**42.0**
Objective 22-9 Percent of students in grades 9-12 who participate in daily school physical education		30.4		29.5	**50.0**
Objective 27-2c Percent of students in grades 9-12 who used chewing tobacco or snuff in the past 30 days		8.3		5.7	**1.0**

YRBS: Youth Risk Behavior Survey

TECHNICAL NOTES

TECHNICAL NOTES

Data Sources:

Bridge-Race Population Estimates:
The Office of Management and Budget announced revisions to the standards for classification of federal data on race and ethnicity on October 30, 1997. These standards require that agencies offer individuals the opportunity to select one or more races when reporting information on race in federal data collections. Census 2000 was the first nationwide implementation of the revised standards.

The files released from the U.S. Census Bureau contain data for single race categories (including "Other race" category) and multiple race categories. This presents problems for vital rates from two standpoints: first, the file contains counts of persons with more than one race and therefore, is not compatible with vital statistics numerators; second, the file contains the "Other race" category that is not used to calculate vital statistics rates.

The National Centers for Health Statistics (NCHS) contracted with the Census Bureau to produce a "bridged" data set in which all multiple race persons are allocated to a single race, to reproduce what these people would have reported had they not had the option to report more than one race. In August 2004, NCHS released state population estimates for July 1, 2001, July 1, 2002, and July 1, 2003. These estimates are for the four race groups (White, Black, American Indian or Alaska Native, Asian or Pacific Islander) by single year of age, sex, and Hispanic origin.

Standard Race Categories April 1, 2000 Census		
Race	Number	Percent
Total	1,293,953	100.0%
White	1,177,304	91.0%
Black	5,456	0.4%
American Indian or Alaskan Native	17,645	1.4%
Asian	11,889	0.9%
Native Hawaiian or Pacific Islander	1,308	0.1%
Other race	54,742	4.2%
Two or more races	25,609	2.0%

Standard Race Categories Bridged Postcensal 2001, 2002 and 2003 Estimates						
	July 1, 2001		July 1, 2002		July 1, 2003	
Race	Number	Percent	Number	Percent	Number	Percent
Total	1,320,585	100.0%	1,341,131	100.0%	1,366,332	100.0%
White	1,274,372	96.5%	1,292,925	96.4%	1,316,780	96.4%
Black	8,651	0.7%	9,399	0.7%	9,764	0.7%
American Indian or Alaskan Native	21,053	1.6%	21,326	1.6%	21,760	1.6%
Asian, Native Hawaiian, or Pacific Islander	16,509	1.3%	17,481	1.3%	18,028	1.3%

Idaho Resident Birth and Death Certificate Data:
Registration of births and deaths is a legal requirement. The attending physician, midwife, or parent must register the birth within 15 days of the birth. Most births occurring at Idaho hospitals are filed electronically. Death registration is usually completed by physicians, coroners, and funeral directors. The death must be filed with the local registrar within five days from the date of death. Birth and death data contained in this report are provided for Idaho residents, regardless of where the event occurred. There is an agreement among all registration areas in the United States for the exchange of their respective resident's birth and death information.

Infant Linked Birth/Infant Death File:
This report presents Idaho resident infant mortality data from the 2000-2002 period linked file (birth cohort). In the linked file, the information from the birth certificate is linked to information from the death certificate for each Idaho resident infant death under 1 year of age. Thus, the 2000-2002 period linked file contains a numerator file that consists of all infants born in 2000, 2001, and 2002 that have been linked to their corresponding death certificates, whether the death occurred in 2000, 2002 or 2003. The purpose of the linkage is to use the many additional variables available from the birth certificate to conduct more detailed analyses of infant mortality patterns.

U.S. infant death data are based on the 2001 period linked file (death cohort), in which death certificates for infant deaths occurring in 2001 were linked to the corresponding birth certificate, whether the birth occurred in 2000 or 2001.

Pregnancy Risk Assessment Tracking System (PRATS):
The Pregnancy Risk Assessment Tracking System (PRATS) is a survey of new mothers aged 18 and older in Idaho, conducted by the Bureau of Health Policy and Vital Statistics. PRATS was modeled after the Centers for Disease Control and Prevention's (CDC) Pregnancy Risk Assessment Monitoring System (PRAMS), a cooperative program that began in 1987 between selected states and the CDC.

The purpose of PRATS is to establish a population-based tracking system to identify selected maternal experiences and behaviors before, during, and after pregnancy which may affect pregnancy outcomes and infant health. PRATS data are meant to supplement information from vital records and to generate data for planning and assessing perinatal health programs in Idaho.

PRATS provides information about the intendedness of pregnancy, timing of initiation and spacing of prenatal care visits, content of prenatal care, barriers to services, prevalence of physical abuse of pregnant women, breastfeeding patterns, and many other important perinatal issues.

Pediatric Nutrition Surveillance:
The Pediatric Nutrition Surveillance System (PedNSS) is a child-based public health surveillance system that describes the nutritional status of low-income U.S. children who attend federally-funded maternal and child health and nutrition programs. PedNSS provides data on the prevalence and trends of nutrition-related indicators.

Idaho State Smile Survey:
The sampling frame for this survey was comprised of all public and charter schools in Idaho with enrollment of $\geq$ 22 students per school in 2nd grade. The primary sampling unit was school, and schools were selected based upon the latest available enrollment information, with higher probabilities assigned to larger schools. 2nd grade enrollment information was used as the measure of size (MOS) for sampling both 2nd and 3rd graders. All students in each of the two grades at each sampled school were targeted for data collection. The samples for the 2nd and 3rd graders were stratified by health district (7 health districts in Idaho), making this a stratified cluster design. Schools that refused participation were replaced with the school with the next closest MOS in that health district.

Idaho Traffic Violations and Collisions:
The source for collision information is the Idaho Transportation Department State Collision Database. The database consists of collision reports completed by all law enforcement agencies in Idaho. All law enforcement agencies use a standard collision report, as designated in Idaho Code 49-1307. The resulting numbers are conservative since the database consists of only collisions investigated by law enforcement officers. For purposes of this report, only collisions resulting in injury or death of any person, or damage to the property of any one person in excess of $750 were included. Collisions occurring on private property are excluded.

Idaho Youth Risk Behavior Survey:
The Youth Risk Behavior Survey (YRBS) was developed by the Centers for Disease Control and Prevention in collaboration with representatives from 71 state and local departments of education and health, 19 other federal agencies, and national education and health organizations. The Youth Risk Behavior Survey was designed to focus the nation on behaviors among youth related to the leading causes of mortality and morbidity among both youth and adults and to assess how these risk behaviors change over time. The Youth Risk Behavior Survey measures behaviors that fall into six categories:

1. Behaviors that result in intentional and unintentional injuries and violence;
2. Tobacco use;
3. Alcohol and other drug use;
4. Sexual behaviors that result in HIV infection, other sexually transmitted diseases and unintended pregnancies;
5. Dietary behaviors; and
6. Physical activity.

Crime in Idaho:
The 2003 Crime in Idaho, issued by the Idaho State Police, Bureau of Criminal Identification, Special Programs Unit, Uniform Crime Reporting (UCR) Section, on July 1, 2004. Statistical information depicts offenses reported to law enforcement after confirmation of a call for service or a complaint clearly indicating the commission of a crime. However, it does not reflect dispositions by a coroner, prosecutor, or court.

Definitions:

Age of Mother:
Age of mother at time of delivery. In 1989, the Idaho Certificate of Live Birth was changed to request "mother's date of birth" instead of "mother's age."

Birth Weight:
Low birth weight is defined as a live birth born weighing less than 2,500 grams (5 pounds 8 ounces or less). Normal birth weight is defined as a live birth born weighing 2,500 grams or more (5 pounds 9 ounces or more). The percent of low birth weight babies is the number of low birth weight live births per 100 live births.

Ethnicity of Mother:
Race and Hispanic origin are reported separately. Persons of Hispanic origin are included in appropriate race categories.

Marital Status of Mother:
Marital status indicates whether the mother was married at the time of conception, at the time of delivery, or at any time between conception and delivery. The marital status field must be completed on the Idaho Certificate of Live Birth.

Gestational Age:
For this report, gestational age of infant is based on the interval between the date of the mother's last menstrual period (LMP) and the date of birth. When the LMP is unknown, the length of gestation is based on the clinical estimate of gestation field on the Idaho Certificate of Live Birth. Preterm birth is a birth occurring prior to 37 completed weeks of gestation; full term birth is a birth occurring at 37 or more completed weeks of gestation.

Health District:
See Appendix B on page 50 for map and list of counties within each health district.

Cause of Death Classification:
Mortality statistics are compiled in accordance with the World Health Organization (WHO) regulations, which specify that member nations, including the United States, classify and code causes of death in accordance with the International Statistical Classification of Diseases and Related Health Problems. The tenth revision of the International Classification of Diseases (ICD-10) was implemented in the United States beginning with deaths occurring in 1999 and replaces the ninth revision of the ICD (ICD-9), which was used from 1979 through 1998. Some changes from ICD-9 to ICD-10 include:

1. ICD-10 is far more detailed than ICD-9, with about 8,000 categories compared with 4,000 categories.

2. ICD-10 uses 4-digit alphanumeric codes, compared to 4-digit numeric codes in ICD-9.
3. Some cause-of-death titles have been changed, and conditions have been regrouped.
4. Some cause-of-death coding rules have been changed.

Educational Attainment for Age of Mother:
Low education attainment for age: two or more years below expected grade level for females aged 17 years or younger; less than 12 years of education for females aged 18 years or older. Average education attainment for age: within one year of expected grade level for females aged 17 years or younger; 12 years of education for females aged 18 years or older. High education attainment for age: two or more years above expected grade level for females aged 17 years or younger; 13 or more years of education for females aged 18 years or older.

MOTHER'S AGE	EXPECTED EDUCATION LEVEL	MOTHER'S AGE	EXPECTED EDUCATION LEVEL
10	4	15	9
11	5	16	10
12	6	17	11
13	7	18+	12
14	8		

Payment Source for Delivery:
Beginning July 1, 1995, the "main payment source for delivery" field was added to the Idaho Certificate of Live Birth. For Idaho resident births occurring in other states, method of payment data may not be available. Because payment source for delivery may change after the birth certificates is filed with the state of Idaho, data may be undercounted or overcounted for some categories. In addition, the payment source for delivery may or may not be the payment source for prenatal care.

Infant Death:
Death of an infant under one year of age.

Statistical Significance:

Dependent Rates:
When comparing two observed, crude (non-adjusted) dependent rates for different areas or times, such as comparing the crude death rate for a particular county with the state's crude death rate, determining whether a significant difference exists between the two crude rates or whether the difference is caused solely by chance requires different and complex statistical computation. Two crude rates are considered dependent (not independent) when the same events are included in their numerators, such as occurs with a state rate and a county rate.

A crude rate is easily computed and usually based on the number of vital events and the total population for a specific area or group, i.e., number of births or deaths among a specific population.

The number of events upon which the two crude rates are based is of primary importance. The statistical formula for determining significance will change depending upon the value of this number. These statistical tools for analyzing rates are crude and rather conservative approaches.

Dependent Rates Based on 10-99 Events:

When comparing an observed crude rate based on 10-99 events (i.e., births or deaths in the numerator) for a county or other local area to the corresponding state or national rate, the actual numbers of events are used to calculate significance. Exactly what is considered a small number of events is arbitrary but, for this publication, we define "small number" as less than 100 events. The formula for this situation is shown below:

$$\mu = (o - e) / \text{square root of } e$$

where:
o = the number of events for the county or local area to be compared
e = the expected or standard number of events for the county or local area (based on the state or national rate)

To compute the expected or standard number of events for the county based on a state or national rate, first change the state rate to a percentage or rate per person. Then, multiply the value of the denominator in the county rate or percentage (the population or total events used to compute the rate) by this figure to obtain the value for e or the expected number events for the county or demographic group.

If μ has a value greater than ±1.96, the county or demographic group rate is considered to differ significantly at 95% confidence level from the state or total rate to which it is being compared.

Dependent Rates Based on 100 or More Events:

Again, what constitutes a large number of events is not definitive but we will use the rule of 100 or more. The formula for determining the significance between two observed, dependent rates with 100 or more events in the numerator is shown below:

$$\mu = (r - s) \times \text{square root of } (n / (s - s^2))$$

where:
r = the county or demographic subgroup rate to be compared expressed as a rate per person
s = the state (or total) rate expressed as a rate per person
n = the denominator of the county or demographic subgroup rate (populations used for computing the rate)

Determining significance based on the value of μ follows the same rules as listed above in comparing rates with a small number of events, i.e., if μ exceeds ±1.96, the rate differs significantly at the 95% confidence level.

Independent Rates:
When comparing two rates that are independent (i.e., they do not include any of the same data or events in their numerator, such as death rates for two different counties or the percent of males verses the percent of females), formulas differ from formulas used for dependent rates.

Independent Rates Based on 10-99 Events:

First, the difference (D) between the two rates is computed:

$D = r_1 - r_2$

where:
r_1 = rate for males
r_2 = rate for females

The 95% confidence interval (CI) for the difference is then computed using the following formula:

$CI = D \pm \text{square root of } (CL_1^2 + CL_2^2)$

where:
CL_1 = confidence limit for rate for males
CL_2 = confidence limit for rate for females

Next, construct a confidence limit or CL (the numerical value that determines the range of the confidence interval, such as ±1.5) for each rate before you can use the above formula to determine the CI. The formula for a 95% confidence limit is:

$CL = 1.96 \times (r / \text{square root of } d)$

where:
d = number of events

At the end of this three-step process, if the confidence interval (CI) includes the value of 0, then it can be stated that the two rates are not significantly different, with 95% confidence. Of course, if the CI does not contain 0, then the difference between the rates is considered significant, with 95% confidence.

Independent Rates Based on 100 or More Events:

If both independent rates to be compared are based on 100 or more events, a less complicated alternative for testing the difference between these two types of rates is to construct a 95% confidence interval for the ratio (instead of the difference) between the two rates.

The formula for calculating the ratio (R) between the two rates based on 100 or more events is:

$R = r_1 / r_2$

where:
r_1 = rate for County 1
r_2 = rate for County 2

Please note that whenever only one of the two rates is based on 100 or more events, then that rate must be used as r_2.

The formula for the 95% confidence interval for the ratio between the two independent rates is:

$CI = R \pm 1.96 \times R \times \text{square root of } ((1 / d_1) + (1 / d_2))$

where:
d_1 = number of events for County 1
d_2 = number of events for County 2

If the resulting confidence interval for the ratio contains the value of 1, then a significant difference does not exist at 95% confidence. If it does not contain the value of 1, then it can be said that the two county rates are significantly different with 95% confidence.

Relative Risk:

The crude relative risk (RR_c) provides a measure of the overall relationship (association) between the risk factor and the outcome. This is a straightforward measure and is often very useful in identifying "at risk" groups. However, it has marginal utility in explaining the nature of the disease or condition and usually cannot be used to suggest causation. The crude risk (RR_c) measures the association between the risk factor and the outcome, irrespective of other shared risk factors.

To calculate the crude risk (RR_c) of low birth weight delivery (<2500 grams) for mothers who smoked during pregnancy, a contingency (2x2) table for the disease/exposure relationship is useful.

	Birth Weight <2500	Birth Weight 2500+	
Smoker	a 1,219	b 10,579	n_1 11,816
Non-Smoker	c 5,084	d 83,643	n_o 88,727
	m_1 6,303	m_o 94,240	n 100,543

$$RR_c = \frac{a/n_1}{c/n_o} = \frac{1{,}219/11{,}816}{5{,}084/88{,}727} = 1.80$$

A Chi-square test can be used to determine the statistical significance and test-based confidence bounds for the relative risk or RR_c.

The following expression calculates the Chi-square value for a disease/ exposure relationship such as depicted in the contingency (2x2) table previously shown. Statistical significance is obtained from the table of a Chi-square (X^2) distribution using the value associated with one degree of freedom X^2 statistic.

$$X^2_1 = \frac{(n\text{-}1)\,(ad\text{-}bc)^2}{n_1\, n_o\, m_1\, m_o}$$

Using data from the 2x2 table of smoking risk, we can insert the appropriate numbers according to the above formula to then calculate the Chi-square. In turn, the X^2 statistic will permit us to test the significance of our effect measure of relative risk (RR_c). The resultant equation with all the corresponding numbers imputed from the contingency (2x2) table appears inside the box below.

$$X^2_1 = \frac{(100{,}543\text{-}1)\,((1{,}219)\,(83{,}643) - (10{,}597)\,(5{,}084))^2}{(11{,}816)\,(88{,}727)\,(6{,}303)\,(94{,}240)} = 373.31$$

The resulting statistical significance taken from a X^2 distribution with one degree of freedom is P<.0001. The probability that the difference in birth weight outcomes between smokers and non-smokers is due to chance is less than 1 in 1,000.

Test-based confidence bounds (using the variance approximation inherent in the Chi-square statistic) can be estimated for RR. The 95% test based confidence bounds for crude risk of smoking in this cohort is determined as follows:

$$RR_c \quad (1 \pm 1.96/\sqrt{X^2_1}) \quad = 1.80 \quad (1 \pm 1.96/19.32) \quad = 1.80 \quad (1 \pm 0.101)$$

or 1.70 to 1.91

Smokers were 1.8 (RR_c) times as likely to deliver a low birth weight infant than non-smokers among this cohort of Idaho mothers. Assuming that the distribution of other risk factors (known and unknown) among this group do not change, we can be 95% confident that smokers (as a group) will deliver between 1.70 to 1.91 times as many low birth weight infants as nonsmokers. It must be kept in mind that this risk could be in whole or in part the result of some other attribute that smokers share.

SAS software (SAS Institute Inc.) was used for analysis to determine relative risk.

Costs associated with this publication are available from the
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